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AN  
E S S A Y  
ON THE EFFECTS OF  
*CARBONATE of IRON,*  
UPON  
C A N C E R.

WITH  
AN INQUIRY INTO THE NATURE OF THAT DISEASE.

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BY  
*RICHARD CARMICHAEL,*

MEMBER OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND,  
AND SURGEON OF ST. GEORGE'S HOSPITAL AND DISPENSARY.

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*The necessity for Operations is, in truth, the Defect of Surgery.*  
HUNTER'S LECTURES, MSS.

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1806.




In

Doct Breer

with best regards

of the Author

✍ Owing to the many changes of late years, in Chemical Nomenclature, it may be necessary to notice, that the Carbonate of Iron of *M. Fourcroy* and the last *Edinburgh Pharmacopœia*, in common language the *Rust of Iron*, is the medicine recommended in the following pages.



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North Cumberland-Street Dublin,  
12th November, 1805.

*My Dear Sir,*

*If in this memorial of my regard I had nothing more to offer you, than Theory, History and Argument, I should hesitate to render it conspicuous by your Name ; but as it contains a relation of two or three simple facts, from which some individual may happen to derive advantage, I have a pleasure in reflecting, that it may not be altogether unworthy of you.*

*My Dear Sir,*

*Your sincerely affectionate*

**RICHARD CARMICHAEL.**

*To ROBERT MOORE PIELE, Esq.*

*&c. &c. &c.*

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# AN ESSAY,

&c.

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## CHAPTER I.

*Cases of Cancerous Ulcer, removed by Carbonate of Iron.*

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**I** Fancy I am not the first to complain of the *ennui* occasioned by the perusal of the generality of modern Medical Productions, which elaborately affect to instruct the Profession in a variety of Knowledge, that we cannot be presumed ignorant of; for the sole purpose of introducing a Case and a Theory in the close of the Volume, that may be undoubtedly very worthy of attention, but certainly do not require the ceremony of so pompous an introduction.

Lest

Lest I should offer a similar opportunity for animadversion, I shall relate a few cases in the first instance, but by disposing them in the beginning of my essay, if they are not capable of satisfying curiosity or expectation, the Reader may avoid the disgust of proceeding further in a Work, wherein I profess to give but little of novelty; but to save him some little trouble in seeking for the facts that I have collected, and merely collected, because they strengthened my Arguments, by their authority, or illuminated a Subject whose obscurity my unassisted efforts could scarcely hope to remove.

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### C A S E I.

On the 20th of March, 1805, Mary Hutchinson, aged 35 years, applied at St. George's Dispensary, to have advice for two foul Ulcers, situated at either side of her nose, which exactly corresponded with the description of that disease, vulgarly termed *Noli me tangere*.—These Ulcers were attended with considerable induration of the surrounding parts, but particularly of the upper Lip, with a dusky redness of the integuments; and had first appeared about  
twelve

twelve months previous to her application at the Dispensary.

She was ordered to take Pills of the extract of *Cicuta* and *Calomel*; the sores were frequently sprinkled with the *Hydrargyrum Nitratus Ruber*, and under this treatment were healed in ten days.

But on the 20th of April following, she again applied for relief, with an extensive Ulcer, which occupied a great part of the upper Lip; its edges were high and everted, and it discharged a fœtid sanies, in which were observable in this, as well as the former attack, several hard bodies, about the size of small peas.—The surrounding parts were indurated and discoloured.

The remedies at first found successful were again prescribed, and the doses being gradually increased, were persevered in for three weeks, but without producing the same good effects—on the contrary, the disease extended itself over the whole of the upper lip, and having baffled the remedies most to be depended upon, my attention was naturally directed to the perusal of recent publications on the subject.

The

The grounds on which Doctor Adams founded his arguments in favour of the independent life of Cancer, seemed to me not unreasonable, altho' between that disease and Hydatids, I could not perceive any very great similarity. But this obviously led me to the consideration, that if the lives of those supposed animals were extinguished, they would be expelled from the body by suppuration,—and as Iron has been found to be very effectual, in destroying intestinal worms, I was induced to hope, that it would be equally destructive to other animals of a parasitical nature.—I, therefore, felt myself justified in making trial of a Medicine in itself harmless, the effects of which more than answered my expectations.

On the 10th of May, I directed my Patient to take twelve grains of the Carbonate of Iron in Pills, every sixth hour, which preparation was preferred, as the Stomach would be enabled to bear a greater quantity of the Metal in this than in any other state—She was also desired to make use of a lotion, composed of a saturated solution of Acetate of Iron in Water.

May 12, an alteration in the Ulcer was apparent, it was no longer painful ; had ceased to  
spread

spread, and the ichorous discharge was changed for healthy Pus.—She was directed to continue her Medicine as before.

May 14,—The Ulcer continued to mend, occasionally discharging substances about the size of the smallest Pea—the dose of the Carbonate of Iron was increased about a scruple every sixth hour.

May 18,—The inequalities on the surface of the Ulcer were almost filled up ; the dose of her Medicine was increased to half a dram, to be taken at the same periods, in the form of an electuary.—and the same lotion was continued.

May 24.—The sore was much contracted in size, and in one part cicatrized—but towards the angles of her Mouth, the edges still continued projecting—the increased dose of her Medicine had excited nausea, it was therefore diminished to a scruple joined with some aromatic.

May 30.—The Ulcer had cicatrized, except a small speck at one angle of her Mouth, which exhibited a foul appearance, accompanied with elevation and hardness of the surrounding inte-

B

guments.

guments. It continued a week in this state; when one of the small tumours before mentioned, was discharged; and the sore entirely healed in a few days.

As there still remained some induration and redness of the integuments, surrounding the cicatrice, I urged the necessity of persevering in the Medicine, from which she had derived so much benefit; but fancying herself completely cured, she paid no attention to my injunctions, and I did not see her till five or six weeks afterwards, when she returned to the Dispensary, with an Ulcer as extensive as the former, occupying the entire of her superior Lip, discharging a watery sanies, and accompanied with retorted edges, hardness of the surrounding integuments with a livid redness, extending downwards from the left angle of her Mouth.—The Ulcer thus rapidly advancing in its progress, as long as the use of the Iron was abandoned.

July 11.—The same Medicine was again administered; but in place of the lotion of Acetate of Iron, she was directed to sprinkle frequently the Ulcer, with Rust finely levigated.—On the following day, an extraordinary amendment had  
taken



taken place in the Ulcer, which now discharged a healthy looking matter, assumed a mild appearance, and was free from the burning pain she complained of the day before.

The alteration of the Ulcer in so short a time was much more remarkable, than when the first trial was given to the Medicine, which effect I attributed to the local application being in a more concentrated form, than that, in which it was before administered.

Under this mode of treatment, the Ulcer gradually improved, and in a fortnight after her second application to me had completely healed, with the loss however of a considerable part of her lip—she continued well till this work went to Press.

Whether or not the Cancerous Mass is endowed with the principle of vitality, independent of the living body in which it is lodged, except so far as it derives from thence its subsistence, I may without too great an assumption be allowed to attribute the removal of this Ulcer, to the exhibition alone of the Carbonate of Iron, the efficacy of which was so completely confirmed

during the progress of this case, by the return of Ulceration during its omission, and the immediate amendment so evident on its second application.

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## C A S E II.

Terence Bennett, aged 45, of an indolent and debilitated constitution, about the middle of July, 1804, observed on the inner Canthus of the superior Eye-lid, a small tumour which was not productive of any uneasiness till the following month, when Ulceration succeeded and rapidly extended along the inferior margin of the Eye-lid to the external Canthus.

At the period when I first saw him October the 10th, a few days after his admission into the Hospital of the House of Industry, the Ulceration had nearly advanced along the Conjunctiva to the ball of the left Eye, and excited considerable inflammation of that organ—the Eye-lid was covered by a tenacious crust, on removing which, a foul Ulcer was observable, with high edges, and the other characteristic marks of Cancer.

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The Carbonate of Iron finely levigated, was applied twice a day, and a preparation of that metal taken internally.

On the following day the Ulcer had evidently improved under this treatment.

On the 13th of October, three days after the first application, it had no longer a Cancerous appearance; but on an accurate examination through its entire course, I remarked small cavities, resembling those greater ones, observable in issues after the removal of peas—this appearance, I concluded, was owing to the discharge of small bodies, similar to those mentioned in the last case.

By perseverance in the above treatment, the Ulcer continued daily to mend, till the 24th of the month, when it was completely cicatrized. But the Cartilaginous border of the Eye-lid was destroyed by the disease, and the Eye-lid consequently much diminished.

It may be of service to mention, that the application of rust scarcely excited any uneasiness, and though it necessarily got into the Eye, the inflam-

inflammation which existed there, subsided as the Ulceration diminished;—he was allowed to remain in the Hospital three weeks longer, to ascertain whether the disease would return, and was then discharged perfectly well.

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### C A S E III.

A very Young Lady, who in the year 1799, was attacked by this complaint, afforded an uncommon proof of the efficacy of the Carbonate of Iron.

A small pimple first appeared at the side of her Nose, which, by frequent irritation, degenerated into that species of Ulcer termed *Noli me tangere*.—Many experienced Practitioners were consulted, who informed her Friends of the inveterate nature of her complaint—and at the same time prescribed Cicuta, Calomel, arsenical Lotions, and the other remedies employed in Cancer, but without any beneficial effect.

On the 10th of October, 1805, in the sixth year of the progress of the disease, Carbonate of Iron was first applied; at which period the Ulcer was irregular, with high and everted edges,  
and

and discharged a thin Ichor, while redness and induration extended over the greater part of her Nose, so that there were serious apprehensions, that the Cartilage and bones were engaged in the disease.

But on the use of Iron, the pain in a few hours ceased, and the application not having been disturbed for two days, formed a scab which fell off at the end of that time, leaving the sore evidently amended, and discharging healthy looking matter.—The Rust was applied daily till the 16th instant, when a dry crust formed, which dropping off in a few days, left the parts completely healed.

Thus this Young Lady was cured of a disease in six days, which had obstinately withstood for as many years, the most powerful remedies heretofore employed in this disorder.

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#### C A S E IV.

Thomas Smyth, aged 40, of an inert habit of body, was admitted in October 1805; into the Hospital of the House of Industry, on account of two Cancerous Ulcers, one situated on the Scrotum, and the other on the calf of the Leg.—  
The

The latter made its appearance eighteen months since, and was preceded by a warty excrescence about the size of a bean.—But when he was admitted into the Hospital, the Ulcer extended six inches from the Tibia to the back of the Leg, and four from above downwards.—The surface was rendered unequal by many small bodies resembling warts, and in some places, there appeared an attempt of nature, to heal this extensive superficial sore by the formation of small patches, of an imperfect skin ; there was a livid redness of the integuments, surrounding the Ulcer, and he complained of frequent shooting pains.

The Ulcers of the Scrotum commenced about four months after the other ; they were irregular with high edges, surrounded by discoloured integuments, extending from the Pubis to the lower part of the Scrotum, and were accompanied with the usual pains.

On the 27th of October, these last Ulcers were sprinkled with the levigated Carbonate of Iron, and he was directed to take a Pill of the same preparation, containing five grains every fourth hour.

Octo-

October 30.—Two or three of the smallest Ulcers were healed—the more considerable much improved in their appearance and the shooting pain entirely gone.—This day he mentioned to me for the first time, the Ulcer on his Leg, to which I then applied the Iron, and directed him to rub in, an Ointment, composed of equal weights of the Carbonate of Iron and Axunge, on the inferior part of his Leg, with the view, that the Absorbent Vessels might convey it into the neighbourhood of the disease.—The Pills to be continued as before.

November 4.—The Ulcer on the Scrotum covered by thick brown crusts—that of the Leg improved in its appearance.—In the intermediate time from this day till the 10th of November, they mended daily, insomuch that the Ulcer of the Leg, after discharging a number of the above noticed warty excrescences, is nearly covered by healthy granulations, and must shortly heal, if something unforeseen does not interrupt its present course of amendment. But the Scrotum, I may venture to pronounce free from Cancer, as it is at present completely cicatrized.

## C A S E V.

John M'Donald aged 79, enfeebled as well by years as disease, had been long subject to cough, and difficulty of breathing, when he was attacked by an Ulcer on his Leg, for which, in August 1805, he applied to be admitted into the same Hospital.

The Ulcer which was of two years standing, bore a most malignant appearance, and every characteristick of Cancer : on the 1st of September the rust of Iron was applied, but an habitual Diarrhæa was unfavourable to the exhibition of that Medicine internally, unless in the smallest quantities.

However, in a few days, the projecting edges of the Ulcer began to decline, and the pale ashy appearance of its surface, was changed by the growth of healthy granulations:

During its application, white sloughs came away, among which was a projecting gristly substance from the centre of the sore, that he mentioned



tioned, to have existed previous to Ulceration—on a section of this small body, a granulated texture was evident.

He continued daily to improve, the edges of the Ulcer being nearly level with the surface, in some parts it even exhibited the appearance of cicatrizing, and he scarcely ever complained of the shooting pains.—But the application being intermitted during my absence for five or six days—I found on my return, that the Ulcer had nearly degenerated to its original malignity—however, by a renewal of the remedy, it soon resumed a more healthy appearance, and raised an expectation, that it would yield to the Medicine.

But about the middle of October—Cough, Dyspnea and Diarrhæa, attacked him all-together and prevented the possibility of the internal exhibition of Iron.—But the Ulcer as might be presumed becoming worse, I determined on the 1st of November, to introduce it by friction, as in the last case—by a perseverance in this treatment an amendment was apparent, instanced particularly in the entire removal of the symptomatic pain, and there is every

reason to suppose that if he recovers a little more strength, the Cancer will be finally subdued.—However, this case as well as the first, furnishes sufficient evidence of the efficacy of Iron, in the relapse or amendment of the Ulcer, according as the Medicine was omitted or applied.

But the vital powers of this poor old Man, are reduced so low, that we could draw no just conclusion against the application, even were it altogether unsuccessful, but should rely on it with double confidence, if he is fortunate enough to recover.

But the prejudices of so many Centuries, cannot be easily removed, and I am persuaded, that many will doubt the Cancerous nature of the Ulcers that fell under my care; to satisfy them on this point, I can only assure them that in the first case the Physicians of St. George's Dispensary, Doctors Toole and Gahagan, who had an opportunity of observing it throughout its course, entertained not a shadow of doubt of the Cancerous nature of the disease. And that the other cases were seen either singly or conjointly, by Messrs. Piele, Rivers and Todd,  
Surge-

Surgeons of the Hospital of the House of Industry, not only before the Carbonate of Iron was applied, but during the progress of its success, and at once pronounced them to be Cancers, so evidently were they marked by every characteristic of the disorder.

But it is observable in those cases, that the rapidity of the cure was in proportion to the smallness of the Cancerous Mass, so that it must be expected that when the disease is of considerable extent, as in Cancers of the Breast and Uterus, that a proportionable length of time must ensue, before a Cure can be effected.

But the consequence of the preceding cases, and the advantages that in my opinion may every hour be derived from them, in the treatment of this hitherto incurable disease, will plead my excuse for giving my ideas to the Public, before I have completed the course of experiments I am making on the Subject, or collected facts, sufficient to place the principles I wish to establish beyond doubt or controversy.

## CHAPTER. II.

*Opinions of the Ancients concerning Cancer.*


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AMONG the number of diseases, which has occupied the Physician, not one has so completely eluded his researches for its cause, or his exertions for its cure, as that which at present engages our attention.

Theorists of every age have endeavoured to account for the sources of Cancer on those speculations, which led them according to the fashion of the day, to impute to the same origin diseases essentially different in their nature.— But that which most conduces to suppress any spirit of enquiry is the facility with which we yield a deference to the doctrines of authority, and reject the suggestions of our judgment and experience; thus the Aphorism of Hippocrates

pocrates\*, in which we are directed not to attempt the Cure of Cancer, has been almost literally obeyed for upwards of two thousand years—and 'tis only of late, that any rational enquiry has been made concerning its nature, by that mode which would appear the most obvious, an investigation into the structure of the diseased Mass.

We find Celsus† almost as strongly prohibiting any attempt for the removal of Cancer, who says, that in his time, a few employed Escharotic Medicines, that some destroyed it with the Actual Cautery, others extirpated it with the Knife, and that no Medicine availed, but that all these means only served to irritate and increase the Cancer, till at length the Patient be-

\* *Cancros occultus omnes melius est non curare.—Curati enim cito pereunt, non curati vero longius tempus perdurant.*

APHORISM, Sect. vi. 38.

† *Quidam usi sunt, medicamentis adurentibus, quidam ferro adusserunt, quidam scalpello exciderunt, neque ulli unquam Medicina proficit; sed adusta, protinus concitata sunt, et increverunt, donec occiderent. Excisa etiam post inductam cicatricem tamen reverterunt.*

CELSUS, Lib. v. Cap. 28.

cam

came its victim, and that extirpation even tho' the wound should cicatrize, was attended with no better success.

However a far greater latitude in the employment of remedies for this disease, is admitted by Galen, who in his commentary on the Aphorism of Hippocrates\*, above alluded to; explains the epithet occult, as either describing a Cancer, before it has proceeded to Ulceration, or one situated in a remote part of the body, as the Palate Rectum or Uterus.—In the former instance, he directs us to extirpate the diseased part, when situated so near the surface, that it can be removed at once with its roots, but in the latter† he agrees with Hippocrates, in the prohibition

\* Gal. in Aphor. Hipp. Lib. vi. Tom. 4, p. 705.

† Nam et qui Cancrum in palato constitutum, et in sede, et in sinu occulto muliebri, vel usserunt, vel secuerunt, non potuerunt hulcera ad cicatricem perducere, et homines in curatione afflictos, ac maceratos, usque ad mortem adduxerunt: qui si nullam curationem adhibuissent, longiore tempore vitam, cum minori molestia transegissent

Tales igitur cancos nullo modo curare tentemus: ex eis vero, qui in summa parte corporis hærent, illos tantummodo, quos possumus, una cum radicibus, ipsis ut quispiam dixerit resecare.

GAL. in APHOR, HIPPOCR. Lib. vi. Tom. 4, p. 705.

of

of every kind of remedy—Incipient Cancers he also tells us, may be readily cured, because the *Atrabilious humour*, at this period of the distemper, not having as yet acquired its gross nature, quickly yields to Purgatives\*—but for this information, we are probably more indebted to his Theory than to his experience of the disease, for in modern times, no instance is related of a genuine Cancer being removed by such means; indeed as long as Galen's Theories supplied the place of every rational enquiry, we find this disease constantly attributed to melancholy or atrabilis; but some of his followers indulged an attempt at originality, by transferring the odium of an inveterate malevolence to other humours, a sufficient variety of which, was discovered to suit every taste.—These deviations from the original precepts of Galen, at length produced violent controversies, an instance of which may be found so late as the 17th Century, in Rodericia Castro Lusitanus's

\* Hunc igitur Morbum (ut diximus) in principio sanavimus, & tunc præsertim cum atræ bilis humor non admodum crassus videbatur existere. Nam hic purgantibus medicamentis, ex quibus sanitas sequitur, promptè succumbit.

*Gal. ad Glau. Lib. ii. Tom. 3, p. 1391.*

history of the diseases of Women, that strongly marks the excess to which vague Conjectures and Theories unsupported by facts, may mislead the understanding\*

The mode of treating this disease may be justly presumed as absurd and inefficient as the opinions concerning its origin, and thus we find in almost every ancient Author, a long catalogue of inert or incongruous remedies; tho' at the same time, we are generally informed that the Knife and Cautey are alone to be depended on.—We have in one view, in a compendium of the practice of Physic, published by Schmitzius in 1600, at Leyden†, the favourite and

\* *Illustris & controversiæ plena est de materia Cancri apud scriptores disputatio, nam Brachelius ex melancholico succo minimè adusto oriri; ideoque male quosdam ex fervidâ bile gigni dixisse pugnaciter contendit. Placitansam Galenus dedit qui Cancro causam præbere dixerat humorem melancholicum, qui est fex sanguinis & a liene attrahitur, is autem humor adustus non est, neque fervidus, sed pura sanguinis superfluitas atque benigna, cum sit lienis alimentum recte dixeris sanguinem melancholicum, qui ex bile atra sanguineve fervido ac retorrído cancri originem constituit.*

*Rod. Cast. Lusitani Lib. i. pars. 2, p. 145.*

† The following remedies may serve to shew the eccentricity of our predecessors.—*Cochlearum carneselixæ—Cancri fluvii.*



and established remedies for Cancer, among which, there are many that must excite our risibility, on account of the extraordinary reasoning which introduced them into practice.—But it is evident that this disease, was then as little affected by remedies as at present, for Vesalius after enumerating as great a variety of Medicines as Schmitzius, closes his chapter with a melancholy reflection on the perverseness of the disease, which calls upon us to abstain altogether from powerful remedies, and content ourselves with lenitives, altho' their virtue extends no further than to cleanse the Ulceration\*.

However we are not entirely to neglect the Precepts of the Galenists, on account of the confused medley of remedies they have transmitted

fluviatiles—Ranæ virides—Oleum Ranarum—Cineres Cancrorum—Pulvis Stercoris humani—Lac Asinum—Catellorum & felium sectorum applicatio—oculi Cancrorum in marmore Lævigati sumpti cum juscule vel vino plurimum possunt in maximis doloribus Cancris—nonnulli quotidie gallinam apponunt, quam comedit Cancer.

*Schmitzii Compend. Pract. Med. p. 62.*

\* Tutius igitur, cum contumaciam morbi hujus vidiamus, a vehementibus medicamentis abstinēbimus, solis lenibus & quasi adblandientibus contenti præcipuè in maximè Ulceratis Cancris. *in quibus si non aliud agamus saltem saniem abluamus.*

*Vesalii Chirurg. Mag. Lib. v, Cap. 17, p. 1096*

to us, for some of them at least are capable of palliating the malignity of the disorder, and among the number I include the recommendation of frequent Purgatives\*, which tho' probably at first directed with the intention of evacuating *atrahilis*, would not have been so generally esteemed, if some real benefit had not been observed to follow their exhibition—and no means seem more likely to prevent the increase of a Cancer, when situated near the external surface, than the practice here recommended, which by determining the impetus of the blood to a distant part, diminishes its force in the neighbourhood of the disease; and we need no further proof of the necessity of lessening as much as possible, the excitement arising from a malady attended with so much pain, than the knowledge of the injurious effects, which always succeed the use of emollients, stimulants or whatever tends to quicken the circulation.—And the same intention will be still further an-

\* *Galenī Meth. Med. Lib. xiv. Tom. 3, p. 1330.*

*Pauli Æginetæ Lib. iv. Cap. 28.*

*Andreas Vesalii Chirurg. Mag. Lib. v. Cap. 17.*

*Hieronymi Fabricii Lib. i, Cap. 22, p. 120.*

*Guil. Fab. Hildani Cent. 3, Obscrv. 87.*

*Wiseman's Surgery Book i, Chapter 21, p. 102, &c. &c. &c.*

swered by the frequent application of Leeches, which Ambrose Parey\* informs us, is a powerful means of alleviating the severe pain so often attendant on this disease.

Another class of remedies much esteemed by them in this and other diseases, which come under the care of the Surgeon, is the external use of narcotics particularly the solanum nigrum; in the juice of which Paulus Æginetæ† desires folded linen to be moistened and constantly applied to the Cancer; these means tho' incapable of removing, may yet retard the progress and alleviate the torments of this disorder, and appear to be too much neglected by the modern Surgeon.

When the doctrines of Paracelsus began to subvert those of Galen in the Schools of Physic, Cancer as well as other diseases to which it bore not the smallest resemblance, were supposed to have their origin either from corrosive Acids or Alkalies accumulated in the blood and impelled if their attack was local to the seat of the disease.

\* *Ambrose Parey. book vii. Cap. 30.*

† *Pauli Æginetæ Lib. iv, Cap 26.*

The most reasonable of those Theories may be found in Hildanus, where we read, that the learned Heurnius, had observed two several poisons to exist in Cancer, the one of a putrid the other of a corrosive nature. If Emollients, which are usually employed to promote suppuration, should be applied, the former is brought into action and deeply infects with its putrescent virus; but if Escharotics are resorted to, the other poison is then excited, which consumes the surrounding parts.\*

Thus Heurnius, I may say poetically but not unjustly describes, the implacable nature of a malady that is but exasperated by remedies that relieve other diseases; to which it perhaps may bear an external, but not a more intimate resemblance.

\* In Cancro enim inquit doctissimus Joh: Heurnius, duplex esse venenum observatum est, unum putrefactivum: alterum corrosivum, si igitur ei admoveas calida & humida remedia, quæ pus promovere solent, in apostematibus ac Ulceribus, pepasmi capacibus, inde in altam putredinem degenerabunt, cunctaque vicina putrilagine contaminabunt. Quod si illam fætitatem causticis castigare volueris, surget alterum, quod in Cancris venenum est corrosivum, ac vicina cuncta exuret.

*Guil. Fab. Hildani Cent. iii, p. 268.*

But

But it would be needless to consume time, in repeating hypotheses that have been long since exploded, and as little founded in truth, as those to which they succeeded.—I shall therefore pass them hastily by, to take notice of others, which perhaps approach nearer to truth.

Van Helmont in his chapter de Ideis Morbosis, instances many diseases which he very incomprehensively supposes to be propagated by seeds, and to exist independently in the system\* and illustrates his Hypothesis by the example of Cancer; which he tells us, in its origin and progress resembles in size, and in the expansion of its roots a germinating bean; but were the original Cancer destroyed by Ulceration, another plant more deeply rooted would succeed to the old†; and he elsewhere observes, that this disease, from an imperceptible beginning, becomes in truth a

\* De Ideis Morb. Van Helmont, p. 543.

† Etenim quamvis fundus Canceri exulcerati, æri expositus, fuerit objectum primum, ubi conceptus & natus fuit: attamen fundo illo per corrosionem absumpto, semper penitior alter succedit, novo contagio infamis, velut ac si nova faba indies germinaret.

*Van Helmont de ideis Morbosis, p. 546.*

*subsist-*

*subsisting Being*, endowed with many properties\*. Undoubtedly Van Helmont, indulged similar opinions concerning other diseases, for which he could have no rational foundation, but it is not unlikely, that his acute judgment struck with the Phenomena of Cancer attributed to it independence of life, but actuated by too great a desire of generalizing facts, extended the same doctrine to other diseases.

Notwithstanding Van Helmont's opinions, Cancer was still supposed to arise from a vitiated state of the fluids, and no other origin was assigned, till near the conclusion of the seventeenth Century, when this disease excited considerable attention by assailing the Life of so great a personage as Ann of Austria, Mother of Lewis xiv.

Among those who then offered their opinions, M. Gendron most deserves our attention, for discarding the Chemical Hypotheses then in general favour, and grounding his Theory alone on the structure of the affected parts,

\* Ergo morbus est *ens veré subsistens* in principio invisibili, proprietatibus variis donatum: non autem intemperies vel diathesis, ex contritatis pugna, mistione, gradu, & humorum factorum comitantia Surgens.

*Van Helmont, de ideis Morbosis, p. 546.*

which

which he accurately examined, he supposes, the disease only to consist in the transformation of the Glands, Nerves and Lymphatic Vessels, into a hard indissoluble uniform substance, which effect is produced by the cessation of the *filtration* of the part, and tho' at first, the Germen of the Cancer consists of a small induration, yet the obstruction gradually extending, augments the volume of the diseased Mass.—But concerning the filaments attached to Cancer, which branch out into the neighbouring parts, he enquires, are they the roots of this malady, that like venemous Plants in the earth, suck this specific acid to the Cancer from the flesh\*.”

The treatment he recommends is palliative, as he thinks a cure seldom possible, because of the diffused depth of the roots, and not on account of a peculiar virus or acid as many then imagined—to the same cause he also attributes the difficulty of healing Cancerous Ulcers, as the fibres of the Skin will not unite with those of the new formed Mass.

On reading those opinions, we are struck with the near approaches M. Gendron made to the independent vitality of Cancer.

Vide Enquiries into the nature and Cure of Cancers, by M. Deshaies Gendron, p. 6—26.

About the same period M. Helvetius published his Observations, which assign the source of Cancer merely to the coagulation of a small drop of humour in a gland, extravasated by the effect of some external violence and its growth he attributes to the frequent addition of a similar humour coagulating with the first; but to account for the succeeding pain and Ulceration, he is obliged to adopt the customary hypotheses of Leavens Effervescence and sharp humours.

Extirpation is recommended as the only cure for a confirmed Cancer, but at the beginning he says it is so inconsiderable a disease, that it may be easily removed, by dissolving the small portion of humour, then but imperfectly coagulated or consuming it by Escharotics.—But I fear this advice can afford but small advantage, as the Patient at this early period must be ignorant of his danger—The discovery that it might derive its origin from an external accident, was however advancing a considerable step at a time when it was universally considered a constitutional disease.



## CHAPTER III.

*Modern Opinions concerning Cancer.*


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**I**F we derive but little information from the Ancients who attributed the origin of Cancer to imaginary sources, the Moderns bestow as little satisfaction, by ascribing it to causes evidently insufficient to its production, and which point out no rational method of Cure.—Thus Boerhaave supposes Cancer to arise from the excitement of Vessels surrounding a scirrhus, and this last he attributes to whatever inspissates or coagulates the juices in a gland.—Hiester assigns the same origin to both Scirrhus and Cancer, viz. inspissation and Coagulation of juices.—Le Dran imputes it to the obstruction of one or more glands, which he says only produces a scirrhus tumor as long as the fluids remain unaltered, but as they become vitiated the tumour degenerates into a Cancer.

Færon attributes the origin of this disease, simply to obstruction of the Glands Lymphatics or Lactiferous tubes, which having become impervious adhere together.

But it would unnecessarily consume time to recount the names of Authors, who have transmitted to each other opinions similar to those just mentioned\*, which neither point out any rational cause for the painful progress and incurable nature of the disease, nor the extraordinary alteration in the structure of a part afflicted with Carcinoma.—However Doctor Darwin's opinion is too singular to be omitted, he observes that “After the absorbent veins of a  
 “gland cease to perform their office, if the  
 “secerning Arteries continue to act some time  
 “longer, the fluids are pushed forwards and  
 “stagnate in the receptacles or capillary vessels of the gland, and the thinner part of them  
 “only being resumed by the absorbent system  
 “of the gland, a hard tumour gradually succeeds  
 “ceeds

\* I have done great injustice by omitting in the text, one modern Author, who has dissipated every doubt, which embarrassed this subject, by informing us that *Cancer* “is of  
 “an *obscure* or what may be termed the *Carcinomatous*  
 “*inflammation*.”

*Vide Doctor Will. Nisbet on Cancer.*

“ ceeds, which continues *like a lifeless Mass*, till  
 “ from some accidental violence, it gains *sen-*  
 “ *sibility* and produces Cancer or suppurates.”

It may however be objected that Cancers occur in other parts as well as glands, that they often make their appearance without being preceded by a hard tumour, and it remains to be explained by what process accidental violence can produce sensibility in a lifeless Mass.

But an hypothesis has been lately revived by Doctor Adams, which assigns to Cancer, a life independent of the part in which it is situated, This Theory had previously been supported by a variety of arguments grounded on as great a variety of irreconcilable facts ; for we are told in the *Bibliotheca Anatomica*, that by the microscope we may discover a multitude of small worms in ulcerated Cancer.—Justamond in his treatise on this disease, supposes that it is formed by insects\*, the Germina of which are imbibed from the air by lymphatic vessels, and that while they remain

\* Doctor Mosely relates that “ at the Bay of Honduras, “ a true Cancer which is called the Bay sore is endemic, “ the Indians say, that it is produced by a large fly depositing “ its eggs in the Flesh.”

*Mosely on Tropical diseases.*

remain in an inanimate state, the scirrhus tumour is free from uneasiness and pain, but an *accidental violence*, bringing them to life quickly induces the ulcerated state of the disease.—He was led to this conjecture from observing, that the absorbents were most numerous in those situations where Cancer usually occurs, by which structure the Germina of insects floating in the air, would be more readily absorbed, that the pain “peculiar to Cancer favours the notion of insects corroding the part,” and he supposes that arsenic would destroy the animalcula of Cancer, as sulphur poisons those which Lewenhoeck proves to be the cause of Itch; every insect having its peculiar bane\*.

Theories founded on such uncertain arguments scarcely deserve attention, only that they prove how frequently the symptoms of this disorder have given us the notion of its production by the action of living animals.—They seem to have nearly dropped into oblivion, till revived by Doctor Adams, who supports with  
much

\* Concerning the life of Carcinoma he says that “he is not singular in that idea, for that in one of the Volumes of Tracts upon Cancers collected by Mr. Bell, he found it introduced as a received opinion.

*Vide Justamond's Surgical Tracts, p. 344.*

much ingenuity and appearance of truth, opinions peculiar to himself on this subject,—As the foundation of this Theory, he premises, that Hydatids possess the simplest form in which animal life can well be supposed to exist; and as the experiments of Doctor Hunter only prove in them a contractile force, which is allowed to be sufficient evidence of their life; so if a similar property can be proved in the contents of a Cancerous tumour, their separate vitality is equally deducible.

In Cancerous breasts he remarks there is always found a quantity of *yellow greenish Fat*, which is contained in Cysts, these together he denominates Carcinomatous Hydatids, and to prove their contractile power, he directs the following experiment to be made “Immediately  
“ after the operation take the amputated part,  
“ and cut it in a transverse, or indeed in any direction, and wherever you discover this fatty  
“ appearance, you will see the surface at first  
“ smooth under your Knife. In an instant  
“ after you will find a papillary appearance all  
“ over this yellow green surface. Each of these  
“ Papillæ you will find the contents of a Capsule, the contraction of which has produced  
“ this conical figure.”

The

The other observations in support of his Theory, chiefly tend to to prove that those parts usually affected with Cancer, are endued with but little powers of life; and which therefore we would á priori, suppose to be best adapted for the nidus and support of beings possessing a sepearte existence. Among those are the organs subservient to the pre servation of the species and not necessary to the existence of the individual, as the breasts and uterus in Women and the testicles in Men which are most susceptible of the disease at that period of life, when they become useless, and consequently possess but a small portion of vitality; however that the cancerous predisposition may be anticipated by injuries, which render them entirely or in part, incapable of performing their usual functions.

As to the scirrhus structure which forms the most considerable portion of Cancer, and possesses somewhat the appearance of softened Cartilage. He argues that “ If Carcinomata pass  
 “ through the same stages as Doctor J. Hunter  
 “ has remarked of the common or lymphatic  
 “ Hydatid, is it not probable that on the death of  
 “ any of them suppuration will follow, and that  
 “ this suppuration may expose the living Hyda-  
 “ tids

“ tids in such a manner that many of them may  
 “ die from not being surrounded by living ani-  
 “ mal matter? To prevent this, he conceives  
 “ a fungus is formed, which incloses individuals  
 “ or clusters of them in separate compartments,  
 “ so that the death of one set produces no effect  
 “ on the rest.” However the Doctor does not  
 inform us whether this fungus is produced by the  
 Hydatids for their own preservation, or by the  
 surrounding parts, for the purpose of preventing  
 the departure of such troublesome visitors; if the  
 latter is the case, it at least proves, that we do not  
 always profit by the assistance of the *Vis Medi-*  
*catrix Naturæ*.

But when the mind rests a length of time on  
 any favourite Theory, it is too apt to seize only  
 the evidence that may confirm, and to neglect  
 altogether that which may subvert the opini-  
 ons it has formed; thus the ingenious Author,  
 who has the merit of opening a new field of en-  
 quiry, overlooks some obvious circumstances,  
 that are strongly adverse to his Theory, which  
 appears to me to have its foundation in the fol-  
 lowing circumstances, viz. the colour, the quan-  
 tity and the consistence of the yellow greenish  
 Fat above taken notice of, together with its ac-

cumulation in Capsules, and the papillary appearance expressive of motion observable on dividing it by a transverse section.

But these appearances seem to be merely the effects of the deranged actions of the animal Economy; except the one evincing a contractile power in what he terms Capsules, but which notwithstanding repeated investigation, I never could perceive. The colour of the Fat in cancerous breasts, that Doctor Adams seems to lay so much stress on, may be produced by animal hepatic air, which Doctor A. Crawford has proved to be "capable of imparting to the Fat of animals recently killed a green colour," and that this very air united with ammonia escapes in great abundance from cancerous as well as other malignant Ulcers\*.

It

\* Experiments and Observations on the matter of Cancer &c. by A Crawford, M. D.

*Vide Duncan's Med. Comment. for 1791, p. 150.*

Hiester appears from the following remark, to have well understood the nature of the discharge from Cancer, "verum  
"similior existit carnibus vel sponte putrescentibus, vel a  
"sphacelo corruptis, aut febre quadam maligna defunctis in  
"quibus vero omnibus nullum sal acidum, sed potius alcali-  
"cum, septicum, putredinem celerem inducens, contineri &  
"reperiri, non solum chimia, aliisque indiciis atque experi-  
"mentis deprehensum est."

*Halleri disputat Chirurg. Tom. ii. p. 517.*



It may possibly be objected, that as in occult Cancers, this air is not separated, the greenish colour of the Fat remains unaccounted for ; but whoever has examined one after extirpation, must have perceived the peculiar fœtor of the disease, arising from the Hepatised Ammonia, almost as distinctly, as if it had even proceeded to Ulceration.—Its great quantity and thin oily consistence I would not attribute to any peculiar organization, but to a diminished action in the absorbents ; which as in dropsy and similar diseases first cease to perform regularly their office, while the discerning arteries possessing the principle of life in a greater degree continue to act with more of their former vigour—this also appears to be the principle from which that obesity arises, so frequent in advanced age.

As to the cells in which this substance is deposited and which seem so strong, that without breaking them, their contents may be dug out, they appeared to me on dissection, to be common cellular membrane, partially supported by the ligamentous bands, or what he terms the fungus, but which had less the appearance of loculamenta containing a liquid, than the roots of a plant penetrating where there was least resistance—but with every attention, I

could not discover the papillary appearance from which Doctor Adams deduces the proofs of the contraction and the evidence of the life of Cancer.—But if any motion should be observed by future investigators, the vitality may be attributed with as much reason to the cartilaginous as to the pituitous substance.

CHAP.

## CHAPTER. IV.

*Inquiries into the Nature of Cancer.*

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I HAVE thus extensively detailed the opinions of Doctor Adams, which notwithstanding the objections that occur, appear to explain the Phenomena of the disease more satisfactorily than any that have yet been offered ; and I confess I cannot but agree with him, in the fundamental part of his Theory, *the independent life of Cancer*, but my sentiments are somewhat different concerning the part in which that life is resident.

I have already given some of my reasons, for not conceiving the Fatty substance of a cancerous breast, with its containing cells to be endued with a sepearte existence, and I shall  
now

now offer those, that induce me to attribute it to the substance resembling Cartilage, with its annexed bands or roots, which I conceive to be the essential part of Carcinoma, from its being always present in Cancerous Tumours in every situation; to maintain the truth of which, I need only add to my own scanty observation, the highly respectable authorities of Doctor Baillie\* and Mr. Abernethy.—To which I may also join the testimony of an old Author, before noticed, M. Gendron, whose observations have the greater weight on account of the particular attention he paid to this disease; he informs us that during eight years dissection of Cancers, he always found in those of the Breast, Womb, Nose, Eyes, Ears and Skin, a substance of an uniform nature, *resembling tender horn*, but that this substance “which is essentially the very Cancer itself, was of a different configuration according to the place where the Cancer was situated\*.”

\* Vide in Baillie's Engravings of Morbid Anatomy, Plates illustrating the structure of Carcinoma of the Stomach, Testicle, Uterus and Ovarium, in which are delineated, “strong membranous Septa” intersecting in various directions the Cancerous tumour.

\* Vide M. Gendron on Cancer, p. 27—28.

ground

That an apparently irregular and inorganized Mass, should possess a vital independent principle is a position not easily digested by the understanding; yet prejudice is daily losing ground as our experience increases, and on a close inspection we find, that the substance of Carcinoma tho' irregular is not that confused indistinct assemblage of various parts, of which it is generally thought to be composed.—“In the female Breast and elsewhere, Mr. Abernethy observes, that Carcinoma commences in a small spot and extends from thence in all directions like rays from a centre—that firm white bands like thickened and compacted cellular substance as the disease advances are seen to extend themselves from the original tumour, amidst the Fat in which it is occasionally imbedded\*.”—It is unnecessary to adduce any farther authority concerning the structure of Carcinoma its commencement and mode of augmentation; but in the few opportunities I have had of examining this disease, the appearances exactly coincided with those described by Mr. Abernethy.—Those white bands extending themselves into the surrounding parts, which every operator is so careful to extirpate, without leaving the smallest

\* *Abernethy's Surgical Observations*, p. 68.—73.

portion, may be easily traced through the Fat, to their detachment from the original tumour, from whence their dimensions gradually taper like the roots of a tree.—If the fat be entirely taken away, nothing will remain but the original hard peculiar substance, with those connected bands or roots, which seem to extend themselves in that direction where they meet with least resistance, and avoid the pectoral muscle, though they pierce the fatty substance of the Breast, at a greater distance from the original tumour.

It is well known that cavities containing a fluid are frequently found in Carcinomata; in those I have had an opportunity of examining, they were never absent: and it is not improbable that if a more particular investigation should take place, the presence of cavities of a greater or less magnitude would be ascertained, as always existing in this substance. I recollect having seen several of them in a section of a scirrhus testicle, which many practitioners present at its extirpation, supposed to be the divisions of varicose veins—similar mistakes may have prevented the acknowledgment of their existence, as essential to Carcinoma.—On this subject Doctor Baillie says, “that from his observations,

observations, he should be inclined to believe, that Cysts are only sometimes formed in a scirrhus structure, but are not essential to it," but expresses a doubt, that " he may be mistaken, and that it might be found by a more minute observation, that the formation of Cysts always constitute a part of a scirrhus structure\*."

Mr. Burns of Glasgow, says that small cavities may be observed in different parts of the diseased Mass, " which are filled with a serous fluid and the sides of which are firm and hard like Gristle ; these enlarge gradually, and new ones form, so that were we to cut the gland, we should find it containing a great number of these cavities.—Those which are nearest the surface of the *gland* generally enlarge most; and sometimes only one gains any considerable size."—He adds " that these cavities, which he also calls abscesses (for what reason it is difficult to determine,) are never found wanting in a *cancerous gland*, and when they are not present, we may be certain the tumour is a different kind of scirrhus†;" so that

\* Letter from Doctor Baillie to Doctor Adams,—vide Adam's observations on Cancerous Breasts, p. 33.

† Burns on inflammation, Vol. ii. p. 433,—6.



there is good reason for supposing that the presence of cavities containing a fluid may by further examination be established, to be characteristic of Cancer.

In fine, it appears that Carcinoma is composed alone of a peculiar substance, unlike any thing in the body, commencing in a point, and gradually increasing, frequently, perhaps always forming cavities in its structure, and shooting out roots into the neighbouring parts; which though necessarily affected by the proximity of such extraneous Mass, are not to be considered essential to its formation, but rather as a nidus contributing to its production.

A close analogy between the functions of Animals and Vegetables is universally admitted—the derangement of those functions constituting disease, must therefore have an equal resemblance; and our countryman Doctor John Gahagan has fully demonstrated this conclusion by experiments and observations, which evince that the accumulation and exhaustion of irritability in Plants are effected by the absence or presence of the accustomed stimuli, and may be productive



productive of diseases similar to those of Animals depending on the same causes\*

The facts in Doctor Gahagan's Essay, have been lately more extensively considered by Doctor Darwin, in his *Phytologia*. But the disorders of Plants and Animals in no instance bear a more striking resemblance than in the effects consequent to the depredations of *Parasites*; which although perhaps shewing scarcely any characteristick of life, produce in each of those great classes, diseases of a most incurable nature; thus fungi of various descriptions, have been observed to destroy the Plants by which they are nourished, a few examples of which are given by Linnæus in his *Philosophia Botanica*; as the Erysiphe or mildew, which penetrates with its roots the vessels of the *Humulus*, the *Acer* and the *Lithospermum*, but which vessels Darwin supposes are *previously injured by internal disease*†—he also takes notice of the *Rubigo* and *Clavus*, Fungi destructive to Corn

\* See an account of Doctor Gahagan's observations on the irritability of vegetables.

*Duncan's Med. Comment. for the year 1789, p. 379,*

† *Phytologia*, p. 321.

and Mr. Lambert in the transactions of the Linnæan Society Vol. iv. describes another, which he terms the *Uredo Frumenti*, that covers the stems of wheat in wet seasons. But Sir Joseph Banks in a late publication has further elucidated this subject, by demonstrating that the Blight in Corn is occasioned by the growth of minute Parasitic fungi, the seeds of which it is presumed, gain admission by the means of Pores, which exist on the straw, leaves and glumes.—They germinate and extend their minute roots into the cellular substance beyond the bark, whence they draw their nourishment, by intercepting the sap, that was intended for the use of the grain.

How numerous then must be the different destructive species of this class, if we consider that those only are noticed, which affect the Plants, that necessarily interest our attention.—Darwin supposes that the most simple animals and vegetables, may be produced by *the congress of the organic particles*, during the decomposition of animal and vegetable matter, without that, which can be properly termed generation\*.

\* Vide Darwin's Temple of Nature—additional note iv.

The green vegetable matter of Doctor Priestly, which is universally produced in stagnant water, the mucor or mouldiness seen on the surface of all putrid vegetable and animal matter, and the various fungi, which arise on the decaying surface of trees, he thus supposes to have a spontaneous origin, and afterwards to be capable of propagating themselves by solitary reproduction; which is also instanced among other vegetables as in the Truffle, that propagates without seeds, by roots alone, and probably in Mushrooms—and among Animals in the *Volvox Globator* which produces an offspring included within itself, to the fifth generation, in the *Polypus* which multiplies by splitting or dividing, and in the *Tænia* generated in the Intestines of Animals, which grows old at one extremity, while it produces an infinite series of young at the other; to which may be added the *Hydatid* that only finds its support in living organs of other Animals, and whose young not larger than pin-heads, have been discovered in clusters attached to its interior surface.

The term *Parasite*, I would also extend to those *Animalcules* that have their nidus and subsistence in the structure of the more perfect Animals, and form a class under which, as many  
genera

genera may probably be enumerated, as of Plants, which take root and germinate in those of a higher order.—But it is only necessary here to notice those Animals, which are peculiar to man; and they may naturally be subdivided into three genera.

The first, comprehending many species of Pediculi, generated on the external surface of the body, and whose locomotive powers enable them to pass from one person to another—among which we may probably include the insects of Cutaneous diseases.

Vermes generated on the internal surface of the body, form a second genus, whose nidus is commonly the intestinal Canal, and more rarely the Uterus\*, Bladder† and Nasalsnius; where.

\* Stalpartius Vander Wiel, relates a case where a large worm had been discharged from the Uterus, and gives the testimony of many Authors of the frequency of this occurrence.

*Observat. 29.*

† Nicol. Tulpius, gives us an instance of a worm discharged from the Bladder.

*Lib. ii. Cap. 49.*

they

they live and propagate their species but are incapable of transporting themselves from one body to another\*.—They do not enjoy an equal portion of life, for the *Ascaris Lumbricoides*, is capable of exerting a brisk serpentine motion, is oviparous and enjoys distinct sexes; while the *Tænia*, only possessing an undulatory motion, which commences by the contraction of the first joint, and followed successively by the succeeding ones, seems more to serve the purpose of

\* In the Philadelphia transactions *Vol. i. p. 60*, Doctor John Capell of Wilmington, relates an extraordinary circumstance—that on dissecting several Rats, he observed tubercles in the Liver, on opening which, worms of the *Tænia* class were discovered coiled up, one of which was sixteen inches in length.—And a similar case is related by Doctor John Clefane in the London Medical Observations, *Vol. i, p. 68*, of a man who long suffered violent pain, in the region of the Liver, and got immediate ease by discharging per anum, an annular worm of considerable length; however he shortly afterwards died hectic.—On dissection, a large cavity was found in the Liver, containing two quarts of a fluid; the hepatic duct communicating with this cavity was so large, that a tallow candle could be passed through it.—The Author supposes that, the worm when small, passed from the Duodenum into the Liver where it supplied itself with nourishment from the surrounding parts. These instances prove, that Parasitic Animals may draw their subsistence from the solid substance of the Bodies in which they reside.

conveying food along its alimentary canal, than to be productive of locomotion.—This being is capable of separating its joints, each of which becomes a distinct animal, called *Vermis Cucurbitinus*, from its likeness to a Gourd seed—the sex is hermaphrodite, and so low is its degree of life that Linnæus has arranged this species amongst the *Polypi*.

But *Hydatids* a still lower species of *Animalcule* form the third genus, and have indiscriminately their *nidus* in various parts of the human body, and shew so little any properties of life, that its presence is only inferred from the near resemblance they bear to the *Hydatids* of *Quadrupeds*, which have been observed to move when put into warm water; and also from a contractile force, which is evinced by the quick expulsion of their contents on being punctured by an instrument\*.—Thus perceiving the chain of Beings which draw their nourishment from man and other animals, descends from gradation to gradation, it may be asked do *Hydatids* alone form the last link of this chain—the analogy between

\* In Mihle's abridgement of the Philosophical Transactions may be seen Cases illustrating the presence of *Hydatids* in the Abdomen, Intestinal Canal, Uterus, Bladder and Neck.

animals and vegetables would lead us to suppose the contrary; and Carcinoma may be found to belong to this genus, though possessing a smaller and perhaps the lowest degree of vitality\*, and bearing as little resemblance to superior Animals, as the Agaric does to the Oak, by which it is nourished.

\* The principle of Life, Mr. Hunter observes, may exist without matter being in a state of action, and only evinced by the property of self preservation, preventing decomposition.—Thus a new laid Egg is alive, though its life is demonstrated by no kind of action; and he proves by experiments, its possession of a power of retaining its proper temperature, by resisting to a certain degree the extremes of heat and cold, a power alone peculiar to life.

*Hunter on the Blood, p.78—Lectures, M. S. S.*

## CHAPTER V.

*Evidence of the independent Vitality of Cancer.*

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THE Vitality of Cancer is not a conjecture resting on analogy alone, but an opinion, strengthened by many striking and I would almost say conclusive arguments; which may be drawn from the known Phenomena of the disease and the remarks of observing writers on the subject.

I. The substance resembling softened cartilage with its cavities and annexed roots, which I conceive alone to form Carcinoma, has no connection, by communicating vessels, with the parts in which it is imbedded; and strongly resembles the gelatinous texture of the Polypus and other Zoophytes.

II. Carci-



II. Carcinoma arises either in parts naturally endued with a small portion of life, or in scirrhi which probably possess it in the lowst degree ; or where the organization is injured by frequent stimuli, or violence ; and particularly when these causes concur with advanced age and diminished powers of the system ; all circumstances which we would a priori, suppose to favour the lodgement and growth of Animalcules in the body, and most of which are known to precede the appearance of Parasitic Fungi in the vegetable kingdom.

1. That Cancer arises in parts naturally endued with a small portion of life, is so obvious a fact, that it need only be mentioned to be acknowledged.—Thus the Breasts, Uterus and Ovaria of Women, and the Testicles of Men, are most subject to this disease, at that period of life, when their vitality is necessarily diminished, by their being no longer capable of performing the functions, for which they were intended ; and therefore become useless appendages to the system. This remark is farther strengthened by the observation of every writer on Cancer, Modern as well as Ancient, that old Men, Women that continue long single, or who are barren after Marriage, are most subject to the disease.—And I may

also add another reason, why Female Breasts are so often the seat of Carcinoma—because though possessing a considerable portion of Nerves, they receive very few Arteries; their structure being chiefly composed of Lymphatics, whose proportion to the blood vessels M. Riche-rand computes as eight to one—their vital powers must consequently be low, as it is generally allowed, that the vitality of any part, bears a proportion, to the number and capacity of its blood vessels; and the knowledge of the frequent appearance of this complaint without being preceded by scirrhus\* or occasioned by violence, induced Mr. Pearson to make a division of Cancers, into primitive, when a part is thus suddenly attacked by the disease, and secondary when it is preceded by scirrhus†.

2. The cause of the diminution of life in scirrhus, is well described by Wiseman in his prog-

\* The term Scirrhus I would confine to a simple induration of parts, and not apply it to that tumour, in which a gelatinous substance resembling softened cartilage is produced, which I conceive to be the distinctive mark of Carcinoma.

† Vide Pearson's Surgery, p. 219—also Van Swieten's Comment. Vol. iv. p. 298, and Justamond's Surgical Tracts, p. 374 which last Author relates a case, strongly illustrative of the sudden attack and rapid progress of the first mentioned species of Cancer.

nostick

nostick of the disease; he remarks that “the true or exquisite scirrhus being altogether *without sense*, admits of no cure. The reason is, because the induration of the part is so great, that it will not open to receive the free afflux of Blood into it, but keeps its own hardness in despite of all applications, and thereby the use of Medicaments is rendered ineffectual.—The imperfect scirrhus which hath *some sense*, is not incurable, but yields by resolution; though very often it terminates in a Cancer\*”.

In a part thus insensible, admitting of neither suppuration nor absorption, and whose vessels we may therefore justly suppose are nearly obliterated, Cancer usually makes its appearance; and since in other situations, we know that it arises in a point, and extends from thence in all directions like Radii from a centre, the same law we may confidently presume is observed in those Cancers that arise in scirrhi.

\* See Wiseman’s Surgery, p. 91.—These observations however are chiefly taken from Galen, who says “*Exquisitus scirrhus est tumor præter naturam sensu privatus, durusque: non exquisitus vero non omnino insensibilis est, difficulter tamen omnino sentit. Scirrhus igitur insensibilis curam non recipit: qui vero difficulter sentit, nec incurabilis est nec facilem curationem admittit.*”

*Gal. Meth. Med. ad Glaucon, Lib. ii Cap. v. Tom. 3.*

Would

Would it be too speculative to suppose that in a part thus gradually becoming unorganized, and verging to the state of dead Animal matter, incipient decomposition should commence in its centre; and that Carcinoma is produced by the congress of the *organic particles*, in a manner similar to the generation of Fungi on the bark of decaying trees?

3. Every part of the body is liable to this disease; we need not therefore be surprised at its frequently attacking the Stomach, which tho' naturally possessing the highest vital powers, is peculiarly subject to have its organization injured, by the frequent application of the most powerful stimuli.—Doctor Baillie observes “that Carcinoma of the Stomach commonly arises at an *advanced period of life*, and that it is encouraged and brought forward by *intemperance*; but supposes that there is a considerable predisposition of the parts towards this disease\*.” And the debility and loss of vital power in a part affected by the constant irritation of a bad ill-conditioned Ulcer, in a similar manner renders it a fit nidus for the production and lodgement of Carcinoma: thus may be explained why a dis-

\* Vide Baillie's Morbid Anat. p. 142.

ease not originally cancerous becomes so in its progress, which is instanced in old venereal buboes, too often, to admit a doubt of the fact.

4. Most Practitioners have observed Carcinoma to be frequently the consequence of external violence, yet seem to doubt the cognizance of their own senses, on account of the implacable nature of the disease, which they could not think capable of being produced by so simple a cause; but the fact is established by the important testimony of Mr. Home.

But whether it originates spontaneously from debility or intemperance, or accidentally from violence, its proximate cause as in scirrhus, is the incipient decomposition of the part where it arises, but that decomposition not extending to mortification—but which on the one hand is the effect of diminished circulation, and on the other, the consequence of the destruction of the organization of the injured part—in each instance equally offering a nidus for the lodgement of independent beings. It is scarcely necessary to remind the reader that Hydatids in the abdomen and other parts, have been the consequence of external injuries. And that the origin of intestinal worms, still wrapt in the darkest obscurity  
affords

affords a strong presumption that many of the most simple orders of animals generate without sexual intercourse.

III. In open Cancers, a similar process is observed, as when an exfoliating bone, or other extraneous matter is lodged in a part, from which the efforts of nature are incapable of expelling it—and after suppuration has failed of its usual effects, a *fungus* shoots out, which in part encompasses the foreign body, and renders it more permanent in its place.

However it has been remarked by Mr. Hunter, that living Animals do not stimulate to suppuration the parts in which they are situated; but when they die, the same effect is produced as by other extraneous substances, as is well known in warm climates, where the Guinea worm penetrates the flesh\*.—I therefore imagine

\* “The guinea worm, called *Vena Medinensis* is, is also a striking instance of this, for while the animal is endowed with the living principle, it gives but little trouble, yet if killed gives a stimulus of an extraneous body, which produces suppuration through its whole length.” This argument is also made use of by Doctor Adams, among his reasons for supposing the existence of Carcinomatous Hydatids.

See *Hunter on the Blood*, p. 208.

in

in this disease, that suppuration can only take place, where a portion of the Cancer is deprived of its vitality.—I say portion because if its independent life be granted, we may presume, that Carcinoma like *Tænia*, may die in one part while it is generating in another; particularly as we observe, that large white sloughs are thrown off in open Cancer, which are most probably the dead parts of the carcinomatous substance.

But so similar is the fungus produced by an exfoliating bone, to that of Cancer, that I have known an instance where the diseases were mistaken for each other.

IV. The origin of Carcinoma first commencing in a point—the formation of Cysts in its texture, containing a fluid—those Cysts evincing a contractile power, by a forcible expulsion of their Contents on being punctured—and the peculiar pain of this disease, are all circumstances which strongly impress the idea that Carcinoma is possessed of individual life.

1. the origin of Carcinoma in a point, intimately resembles the Inciency of an Animal and not a diseased alteration of structure, this fact has been mentioned by almost every

Author\*.—Mr. Abernethy observes that it may serve, as a good diagnostick symptom in doubtful cases.—And M. Gendron remarks, that there is a strong analogy between the commencement, growth and texture of Carcinoma, to that of the horns of Deer at their first breaking out†—and it is not a little remarkable that M. Buffon says, that the horns of those Animals are really a “vegetable production, and resemble a plant in their growth, ramification, solidity drying and separation; for after acquiring their greatest density, they cease to extract nourishment and fall spontaneously like a ripe Fruit‡.”

2. The force with which the fluid is expelled from the Cysts, is undoubtedly far greater than the simple elasticity of the part is capable of effecting; and it is not a little surprising, that some deduction has not been already drawn from

\* Wiseman says for instance, “if a *scirrhus* be the *original* disease of the part, and not the effect of some other, that hath been ill handled, it begins usually like a small *vetch*, or *pea*, and by *degrees* increaseth without shifting or changing of place.” See p. 91.

† Gendron on Cancer, p. 53.

‡ Buffon’s Natural History, Vol. iv. p. 93.

this



this circumstance ; but as those who have not witnessed the fact, will be pleased with a corroboration of my assertion, I shall recite a passage from Le Dran, who endeavouring to demonstrate the infectious nature of Cancer, accidentally mentions a strong proof of the contractile power of those Cysts—he relates “ that in the “ middle of a carcinomatous tumour extirpated “ by his Father, there was a Cyst filled with a “ fluid, which he opened, and part of its contents “ *spurting out* upon his clothes, destroyed the “ colour of them, as if it had been Aquafortis— “ some of it *flew in his face* and he felt continued “ shootings there for several hours, though he “ immediately washed the part\*.”—Therefore the strong force with which these Cysts expel their contents, is not owing to their excessive repletion, but entirely to the action of fibres endued with a contractile power. Such a power even in a smaller degree is esteemed sufficient to establish the animality of Hydatids generated in the human body, and on the same grounds the vitality of Cancer may likewise be inferred.

3. Most writers take notice of the peculiarity and vehemence of the pain ; which commencing

\* See Le Dran's Surg. p. 289.

with an itching, at length gives a lancinating sensation, and is often compared by the fancy of the Patient, to the gnawing of an Animal. It is probably the best diagnostick symptom, by which we are enabled to judge whether Carcinoma has invaded a scirrhus tumour—Van Swieten impressing this opinion, enquires “how  
 “ a scirrhus becomes a Cancer, and by what  
 “ symptoms they are to be distinguished from  
 “ each other; the first is a hard indolent tumour,  
 “ but when it changes to a Cancer, the tumour  
 “ remains and a pain is felt, which was not experienced before\*”—Hiester observes, that a hard rough unequal *painful* tumour, succeeding to an indolent scirrhus is termed an occult Cancer, but it is the pain alone which distinguishes it from scirrhus†.—Sauvages says, that Cancer differs from Scirrhus by its lancinating pain‡—This

\* Van Swieten's Comment. Vol. iv. p. 237.

† Occultus vocatur tumor durus, asper sive inæqualis, dolens scirrhum indolentem subsequens: *quo dolore*, a scirrhum mammarum, qui indolens est distinguitur.

*Halleri Disput Chirurg. Tom. ii, p. 513.*

‡—Definitur tumor durus, tuberosus lancinans, pertinacissimus. *Differt a skirro per dolorem lancinantem, superficiem inæqualem.*

*Sauvages Nosol. Tom. ii. p. 43.*

is also the opinion of Le Dran, who says, that while Scirrhi continue free from *pain*, they cannot be called Cancers; but if they become painful, we need not hesitate to give them that name\*.—It is unnecessary to adduce any further Authority, to demonstrate that a peculiar pain is always connected with Cancer, and serves essentially to distinguish it from those diseases with which it is liable to be confounded; yet I cannot but allow the impropriety of drawing conclusions from a symptom, so variable and indeterminate as pain; but when we combine this with other symptoms, and recollect how fruitless hitherto, every effort has been to account for this disease, or its unremitting accompaniment, we cannot but rest with some kind of confidence, on a simple explanation, that particularly embraces the most prominent feature of the subject; and perhaps would have removed those perplexities, with which it was regarded, by the discerning Hiester†.

\* Le Dran's Surgery, p. 297.

† Vehementes hi dolores, scirrhum mammæ subsequentes, certissimum Carcinomatis signum existunt. Unde vero hi proveniant, nondum adeo planum, aut perspectum est, sed altioris, ut mihi videtur, indaginis adhuc est, atque inventu difficilimum.

Halleri disput. Chirurg. Vol. ii, p. 517.

As

V. As Carcinoma, when excision is imperfectly performed, returns with greater violence, and spreads with more rapidity, than before the operation ; and its renovation not being caused by the contamination of the system from a specifick virus, but by the growth of the sections of its roots which are left behind, it more nearly resembles in these facts, the mode of propagation, by which the lower order of Animals are capable of being multiplied, than the phenomena of an ordinary distemper.—Thus I imagine, an imperfect extirpation instead of removing the original Cancer, produces as many germs as there remain sections of its branching roots ; and that the above fact, in the history of Carcinoma, affords another proof, of its independent organization.

The rapid growth of a relapsed Cancer, after operation, is a fact, which must have come under the observation of every Practitioner ; and Doctor Monro, who particularly experienced the frequency of this occurrence, even doubts the propriety of any attempt to remove it by excision, and observes that, “ upon a relapse, the disease in those he saw, was more violent, and made a much *quicker progress*, than it did in others, on whom no operation had been performed\*.’;

formed\*.”—The fréquent relapse of Cancer, has been very generally supposed to arise from the infection of the general system, by the absorption of cancerous matter ; but I cannot better expose the futility of this opinion, than by reciting the following words of Mr. Sharpe “who-  
 “ ever will make enquiry into the History of Can-  
 “ cers, cured without relapses, will find a great-  
 “ er proportion amongst such, which were of  
 “ many years standing, than amongst those re-  
 “ duced to the operation, very soon after their  
 “ appearance ; and if this observation be true,  
 “ it proves at least, that the danger which may  
 “ accrue from the mere residence of a scirrhus,  
 “ for a length of time, is not of itself a sufficient  
 “ motive for *Castration*; indeed for my own  
 “ part, I am so far from judging unfavourably  
 “ of a Cancer under this circumstance, that I  
 “ think we cannot have better evidence of *its*  
 “ *Locality*, than the little injury it has already  
 “ done to the constitution†.”

I imagine that the opinion which Mr. Sharpe so clearly subverts, has been chiefly grounded on the frequent enlargement of the absorbent

\* Monro's Works, p. 490.

† Sharp's critical Enquiry, p. 106.

glands leading from the affected part, and the ill success of the operation, when that has been the case ; however a few modern Practitioners have extirpated Cancers with success, though accompanied by this formidable symptom.—Professor Richter of Goettingen mentions, that in two cases, where the axillary glands were indurated, the operation was successfully performed, and the induration afterwards gradually disappeared—he remarks that these affections of the glands often arise from sympathy, like buboes in Lues venerea, and do not always contraindicate the operation.—But Mr. Nooth, whose practice was so extensive, and whose observations so accurate, fully confirms this remark, by relating many cases, where he performed successfully the operation, notwithstanding that the lymphatic glands, leading from the cancerous tumour were enlarged ; and he at the same time, accurately discriminates these enlargements of glands which *contraindicate* the operation from those in which it may be *effectual*. The latter, he informs us, though enlarged, are *moveable* and covered by sound skin, but the former are *fixed in their situations*, and commonly accompanied by discolouration and hardness of the integuments\*.—But this state of the lymphatic glands

\* See Nooth on Cancer—Cases and Observations, p. 56—79  
which

which makes the operation dangerous, cannot arise from the absorption of a cancerous virus; as we know, that the most virulent poisons may be imbibed, without producing the effect of fixing these glands, altho' capable of causing their enlargement; then probably it must be the same causes that render the *cancerous tumour itself fixed*, and the attempt to extirpate it so often ineffectual; namely, the extension of the *bands or roots*, we have so often mentioned; and which arising from the original cancer, *penetrate* those affected glands, and necessarily *fix them* in their situations. An instance of the minuteness and penetrating nature of these roots, is mentioned by Hildanus\*, who relates, that on examining a Cancer situated in the tongue, *its roots* could be felt *like threads* scattered in all directions thro' the substance of that organ. M. Gendron also gives the following curious testimony of this fact; in a Cancer situated on the Forehead, to which he

\* In extremitatis linguæ magis dextrâ parte, incunte æstate, tuberculum valde exiguum ab initio erupit. Mox ad ciceris, postea fabæ, tandem neglectum, ad castanæ minoris, majorisque quantitatem, absque omni dolore insigni tamen duritie, sensim excrevit; ita tamen, ut *fili instar* majoris hujus tuberculæ *radicem* per linguæ compresso substantiam ego cum chirurgus tactu sparsam deprehenderim.

Hildani op Cent. iii. Obs. lxxxiv. p. 264.

had applied an Escharotick, he perceived “ *some white filaments* ; laying hold of them with his Nippers, he found them give way, and observed that they proceeded from several places, some coming from the part near the Eye, others from the Nose, while some again proceeded from the Scalp even above the Forehead, and appeared when taken out, like the roots of an Onion”—the Sore healed afterwards, by the use alone, of a common Plaister\*.—And Mr. Justamond examined a Cancer of the Breast, whose roots had even extended into the cavity of the Thorax, and affected the internal surface of the Pleura†. Those circumstances sufficiently explain, why the most extensive excision should so often fail of success.

The foregoing practical observation of Mr. Nooth, claims the greatest attention, in our endeavours to demonstrate the origin of Cancer; for by it, is explained a circumstance hitherto perplexing and contradictory, viz. the frequent return of the disease, when the operation had been performed, during the enlargement of

\* Enquiries into the nature knowledge and Cure of Cancers by Deshais Gendron, p. 23.

† Justamond's Surgical Tracts, p. 376.



the neighbouring lymphatic glands, although Cancer can neither contaminate, the general habit, or generate a specifick virus\*. But there are probably, many who still profess the Ancient Doctrines, that it is generated in the constitution, and determined like syphilis to particular parts; but this opinion can scarcely be entertained by those who are satisfied, that local injury may cause the disease, in persons enjoying otherwise the most perfect health—but it may undoubtedly be esteemed constitutional so far, as diminished vital powers, either of the general system, or of particular parts, predispose to the disease; and this predisposition is also sufficient to account for the existence of Cancer, in two different parts of the body at the same time, which is however a circumstance, that does not often occur.

Were Cancer infectious, as some suppose, the fact must have been established, even in the

\* It is not a little surprising, that Mr. Nooth, notwithstanding his Observation before recited, should conceive that this disease was capable of contaminating the system by absorption, we presume, of a specifick virus—and that Mr. Home, who established the locality of the origin of Carcinoma should possess similar opinions.

earliest ages, for if it possessed a virus capable of imparting the disease, it would have been almost as generally communicated by the touch as *Lues venerea*. But some modern writers, have by experiment, removed every doubt on this subject; Doctor Nisbet frequently infected his fingers, by handling cancerous sores—suppuration ensued in one instance; and in another swelling of the axillary glands likewise occurred, but Cancer was in no instance produced, and the same consequences only succeeded, as would follow the absorption of any acrimonious matter\*. And this received the fullest confirmation from the courage of Mr. Nooth, which can scarcely be approved of, unless it arose from a conviction, that there was but little danger in the experiment; he frequently conveyed a minute portion of the cancerous fluid into an incision in his arm, but without any other effect, than a trifling inflammation which soon subsided†.—But I would not answer for the consequences, if instead of the fluid, he had ingrafted the same limb, with a slip of the cartilaginous substance

\* Nisbet on Cancer and Scrophula, *p.* 173.

† Nooth's Observations on Cancer of the Breast, *p.* 12,

of Carcinoma ; and I confess, that until I reason myself into a belief, that Cancer cannot thus be propagated, I shall not be ambitious to subject myself to the inconveniencies of the experiment.

CHAP.

## CHAPTER. VI.

*Treatment of Cancer.*


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**T**HE Remedies palliative as well as efficient employed for the cure of Carcinoma, even afford a further presumption of its possession of independent life.

For the former, we know to be those only, which detract both *warmth* and *moisture*, the two great promoters of *Animal growth* from the nidus of the Cancer—and the latter are intended to remove it altogether from the body into which it has intruded.

Palliative remedies, which without arresting may perhaps retard the progress of the disease, by lessening the force of the circulation, are catharticks and an abstemious mode of living—the

the former recommended by the Ancients, and the latter reduced so low as a water diet, advised by M. Pouteau, and put in practice with very beneficial effects by Mr. Pearson\*.

The class of sedatives, which once bore a high character for the removal of this disease, but which are now generally allowed to be only serviceable in palliating its symptoms, may probably retard the circulation, by the powers they possess of enfeebling the sensibility of the nervous system, the prime mover of the entire machine; and by diminishing the pain, which would otherwise excite an increased vascular action, they produce a secondary good effect, but particularly around the diseased part.—To these causes, I am inclined to imagine, that *Cicuta*, *Belladonna*, *Hyoscyamus*, *Aconitum*, *Digitalis*, *Solanum Dulcamara*, and the *Laurus Cerasus*, are all indebted for their Character; but they have long since been discovered incapable of effecting a radical cure.

The local means found serviceable in palliating this disorder, are also those which diminish the heat and circulation in the neighbourhood

\* Pearson's Observations on Cancer, p. 113.

of the disease ; as the frequent application of cold water, saturnine solutions, the detraction of blood from the part, and other remedies of the same class.—But the opposite mode of treatment by a full diet, warm emollients and other stimulating applications, by increasing the heat and circulation of the blood, exasperate the disease, and produce a rapid enlargement of the carcinomatous tumour. There are also other remedies that have been found serviceable in ulcerated Cancer ; as Oxygenated Muriatic Acid, recommended by Doctor Crawford ; on the principle of decomposing the discharge which contains Hepatized Ammonia. The good effects of Carbonic acid Gas, brought into notice by Doctor Ewart, may be accounted for, on the same principle ; and the powdered Chalk, which was lately the occasion of a separate publication by Mr. Kentish, I would suppose to be serviceable by absorbing the acrid ichor which is constantly distilled from ulcerated Cancer.

But the means we have hitherto mentioned, are merely capable of retarding the growth of Carcinoma, and do not in the smallest degree tend to free the patient from this dreadful disorder.—And though Carcinoma has been supposed to consist of the substance of the body, altered

ed by disease, yet no mode was ever discovered of renewing its healthy state, or of dissipating it by absorption; and from the most early accounts to the present time, extirpation alone, has been considered capable of affording a permanent cure.

The most general mode of extirpating Cancer is by the Knife, which though undoubtedly the best hitherto discovered, is not as efficacious as might be wished, from the impossibility of the operator's knowing to what extent, the minute roots have penetrated, and the danger of a relapse, from leaving the smallest portion behind.

If we except the inhuman practice of burning by the actual cautery, which has been long since exploded, the treatment next in most general use has been the application of Arsenic, which is a remedy mentioned by most Authors in Surgery, and has had already the fullest trial in this disease.—But we may conclude from its early use, if it had been effectual, its character would have been long since firmly established, and on the contrary, we may justly infer, from its still continuing to be employed, that this powerful medicine has not been altogether misapplied in the treatment of Cancer.

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The peculiarity of its action is greatly deserving of attention, and I would say, affords another proof of the separate existence of Carcinoma; for when applied to the external surface, its action extends much farther than the part with which it comes in contact, and separates a considerable portion of the Cancerous Mass from the surrounding parts, in the same manner, Mr. Justamond observes, as “a nut comes out of its shell, or as if it had been cleanly dissected by a Knife\*.”—This peculiar effect of Arsenic has no analogy in the action of other Escharotics or even in its own action on other tumours, which producing superficial sloughs only destroy the parts, with which they are immediately blended, and their action is easily accounted for, on the general principle of chemical affinities; but the effect of which we are treating cannot be explained by the same laws, and affords a strong presumption, that it arises from the action of this deleterious drug on the vitality of Carcinoma; which being by degrees deprived of life, every dead portion is afterwards expelled like any other extraneous body by suppuration. But were it established as a principle, that the disease must in the end give way to the powers

\* Justamond's Surgical Tracts, p. 379.



of the medicine; the danger of administering the necessary quantities of this, the most violent poison, with which we are acquainted, must operate as a prohibition to its use, or we should too frequently see the Patient subdued by its effects before the disorder.

Electricity has also been mentioned as a remedy, but I cannot conceive in what manner it can be of service, unless by passing strong electrick shocks through the Cancerous tumour, sufficiently powerful to deprive the Cancer of life; and consequently rendering it subject to be thrown off by suppuration; this conjecture was suggested by the power which lightning possesses of depriving Animals and Vegetables of life; together with the known efficacy of electricity in discussing scirrhus tumours, some of which probably were deemed not to be Cancerous, merely because they were capable of dissipation.—Mr. Nooth, from whose practical remarks I have derived so much information, observes “that he had found Electricity of the most essential service in many cases which *had been declared scirrhus*, and that were he inclined to seek professional fame, by finesse, he could adduce a *Mass of evidence in support of this treatment*\*.”

\* Nooth on Cancer, p. 23.

But among the extensive variety of medicines employed by the Ancients, for the cure of Cancer, which included almost all the articles of the *Materia Medica*; it is a little surprising, that not one of the preparations of Iron is mentioned; except by Fabricius, who recommends a very rude form of that medicine, viz. the powder that may be collected from grinding stones, upon which iron instruments have been sharpened—which he advises as a local application to prevent the return of Cancer, by repelling *the humour*, and strengthening the part\*—but among the moderns, I could only find this medicine taken notice of by M. Pouteau, and Mr. Justamond; the former recommends a solution of the metal, in a mineral Acid, to be used both externally and internally, as a palliative remedy capable of correcting the Cancerous virus.—But Mr. Justamond without building his practice on any particular Theory, or opinions of the nature of Carcinoma, was first induced to make trial of this metal, by the recommendation of an empirical compound of equal parts of Sal Ammoniac and Iron, in rectified spirit of Wine, with the addition of oil of Vitriol and oil of

\* Fabricii ab Aquapendente op Chirurg. Lib. i. p. 122.

Tartar, which was directed to be applied to the indurated edges of Cancerous Sores—this extraordinary lotion he accidentally met with in one of the German Ephemerides, at a time when he was considering the best mode of applying Sal Ammoniac to Cancers, on the principle of its “powerful resolute properties,”—whatever virtues this application was possessed of, were most probably attributed by Mr. Justamond to the Sal Ammoniac, and not to the Iron, which may account for his not using the latter medicine in a more concentrated form.—But he was so well pleased with the amendment produced by its application, that he determined on trying a medicine of a similar nature internally; and he accordingly administered the Flores Martiales, which preparation occurred to him, as most nearly resembling the composition of the external lotion.—The dose of this medicine he was enabled to increase from ten grains to upwards of two drams in the day, and he relates several cases of Cancer, as well open as occult, which were either amended or dispersed by these remedies alone.

It appears evident to me, though perhaps others may think me too readily convinced, that the Sal Ammoniac, had no share in producing those

those effects, and that Mr. Justamond was indebted to the Iron alone for the cures he performed. And as it is natural to speculate on a favourite hypothesis, perhaps I may be indulged in the supposition that a preparation of this metal, formed one of the component parts, in at least some of those *secret* remedies, that have been celebrated for their beneficial effects in this disorder, particularly that mentioned by Van Helmont; “whose inventor sprinkled the Cancer with a powder which *gave no pain*, and afterwards healed the part with an incarnative plaister—but this art died with its Author\*,” the absence of pain during the application of this remedy sufficiently demonstrates that it was not composed of arsenick, but that mineral probably entered into the composition of a remedy mentioned by Lusi-tanus, as invented by Fuchsius an Italian, who gained such celebrity in curing this disease that he was generally called the Cancer Physician†.

Consil-

\* Vir quidam, meis diebus, in tractu Juliacenci, Cancrum unumquemlibet sanabat, *insperso pulvere indolente* : atque tum demum emplastro incarnante solidabat, cujus ars secum sepulta est.

*Van Helmont Cap. de ideis morboris, p. 547.*

†——— tale fuit procul dubio medicamentum, quod Fuchsius Italus Cancros curare asserebat, ideoque medicus cancrorum vocabatur; ejus curandi ratio hæc erat; inspecto loco secre-

tum

Consiliarius Kortholt, and Petrus Allioth, as mentioned in the dissertations of Tabor\* and Triller†, which may be seen in Haller's disputationes Chirurg. acquired great fame by the use of remedies, whose composition they never disclosed—but to enquire further into their ingredients, would tend to no other purpose, than to increase our regret and indignation, for the selfishness of the discoverers.

tum, uti dicebat, sibi pulverem applicabat, si intra triduum tumor non exacerbatur, sed in melius tendebat, sanari posse prædicebat, idq; ex sibi secretis signis, quæ ego nulla alia esse existimo, quàm quod à medicamento corrosivo non excandescere, indicium est radices non admodum altè esse infixas, nec humorem valdè adustum uti diximus, tunc igitur pulvere persistebat, ad tricesimam usque diem quo termino ut referebat radices extinctæ, ac attritæ, ex se cadebant, ac si quid adhuc adhæreret, scalpello sensim præscindebat; deinde pulvere incarnante, &c.

*Rod. Castro Lusitanus de morbis Mulierum, Lib. i. p. 141.*

\* Vide Gerard Tabor, de cancro Mammarum, Vol. ii. p. 463.

† Inspersit quotidie albicantem quemdam pulvisculam sibi soli notum, unde post horulæ spatium, levis coorta febricula quæ tamen mox cessavit, et quietem ægræ indulsit. Ita continua pulveris hujus inspersione, sesquimense, effecit. ut vulneris labia ex livido, in rubicundulum terminarentur colorem, et ichor serosus paulatim in coctum laudabiliter pus verteretur: quo facto vulgaribus sarcoticis, ministrante chirurgus plagam consolidavit.

*Halleri Disput. Chirurg. Vol. ii. p. 492.*

After

After the lapse of near a century, our admiration is again excited, by the inventor of an application, that “by gradually increased absorption removes this dreadful disorder, and reduces the part to its proper form;” and again our indignation is provoked, that a discovery so honorable to its Author, should be deprived of all its value, by being withheld from the knowledge and service of mankind; for no other purpose, that can rationally be supposed, than the inhuman wish, that *his* Patients only shall reap the advantage, or the absurd hope that *himself* shall be the only Physician of a disease, that is found in every climate and country.

That this approbation and censure are not undeserved by Doctor Nisbet, every person will be satisfied, that opens his Papers on the subject of Cancer, in the Medical and Physical Journal\*, which are generally in the name of other persons; as if he was anxious to abstain from relating his own cases, lest every reader should ask, why the remedy remained undisclosed, when every page, and every paragraph gave the opportunity, or betrayed the necessity of its insertion—and even when he ventures to

\* See Medical and Physical Journal, Vol. iv. p. 296—545.

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Vol. v. p. 76—188-  
take

take up the Pen, it is amusing to trace the ingenuity with which he winds away from the discovery he seems every moment to approach, until repeated disappointments, inform us of his intention to leave us for ever in the dark.

In the last publication which he honors with his name, he enters with great elegance, into a history of the circulation of the blood, the lymphatic system, and the uses of respiration—explains the composition of Fat, and from thence, when we suppose, the subject he meant to treat of, was forgotten, he at length makes a transition to Cancer, dissects the parts of the disease, and promising a nearer view of its characteristic symptoms, breaks off his letter in the middle, and raises our expectations by a parenthesis at the foot of the page, that his labours are (*to be continued\**.)

But if they ever were continued, from that time to the present, from the first of October, 1802, to the first of October 1805—I can only regret my want of good fortune, for I cannot tax myself with deficiency of diligence, in not being able to discover the residue. But among the communications of his Amanuenses†, I find

\* Medical and Physical Journal, Vol. viii. p. 294—300.

† ————— p. 431.

the treatment of one case, which strongly excites my attention—a Cancer of the Uterus, accompanied with venereal symptoms; and *with a view to this last circumstance*, a pill composed of *four parts of Steel*, and *one of Mercury* was prescribed—along with this, Cicuta and Carbonic acid were thrown in, but whether intended against the Cancer, or the Lues, we are not allowed to discover,—however to palliate the pains in the back and loins, a strong camphorated ointment was rubbed in, and we have the satisfaction of ascertaining, that this at least was to combat with the Cancer; but whether it did the business alone or in conjunction with the other ingredients, we find that after eight days, the pain decreased, and the Patient recovered\*.

If the Doctor had not expressly said, that the Steel was intended for the Lues, I should have supposed it was his chief engine of attack against the Cancer; and if it was really used with that view, Humanity and Candour require the ac-

\* It is rather surprising that in a following Case, we are told, Doctor Nisbet proposed *the same plan of treatment*, as in the preceding; although there is no hint that there was venereal affection to be combated.



knowledgment, and I call upon him publickly to declare whether any preparation of Iron is, or is not his *secret remedy*.—If the first is the case, the public may rely with double confidence on the value of the medicine, and if the latter, a stimulation will not be wanting to the Man of Science, to add the confirmation of his experiments, to those my scanty opportunities, and limited sphere have permitted me to make.

The different modes of treatment, serviceable in Carcinoma, which I have endeavoured to point out, afford a concurrent testimony, with the other evidence of its independent vitality; and we may presume, another proof in the efficacy of the Carbonate of Iron in this disease, from its acknowledged effects upon *Tænia*, and the other species of intestinal worms, equally depriving them all of life. Since the trial of this medicine occurred to me, I have not been so fortunate, as to obtain an opportunity of ascertaining its powers in Cancers of the Breast and Uterus. But the mode of exhibition, which I would pursue, if the disease had proceeded to Ulceration, would be similar to that mentioned in the cases I have recited—and in occult Cancers, besides administering the medicine internally, I would endeavour to have it conveyed

to the diseased part, through the absorbent vessels; by means either of the friction of an ointment, in which precipitated Carbonate of Iron is blended, or by a solution of some of the Salts of that metal, constantly applied to the part\*.

But when Carcinoma is thus deprived of life, and that Ulceration should happen not to be the consequence, it would naturally be removed by the absorbing vessels. And this position is supported by the respectable authority of Doctor Alexander Monro, who “ acknowledges “ the resolution of Cancer to be very rare; but “ having seen two such tumours, or at least “ what he judged to be such, *cured*, he would “ not exclude the supposition altogether†.”

Could we satisfy ourselves that other diseases, derive their origin from an extraneous body, like Cancer endowed with independent life, I would not hesitate to attempt their removal,

\* The use of natural or artificial Chalybeate Waters, must afford powerful assistance, when the disease is formed, and would be probably the best mode of prevention at that period of life, and in Constitutions where we might dread the approaches of this malady.

† Doctor Monro's Works, p. 490.

son

by the same remedy; and I have strong reason to suppose, that among the number, that species of Consumption may be included, which originates from tubercles in the lungs: one reason I shall mention,—those tubercles frequently resemble the small round bodies, I have found in that description of Cancer, termed *Noli me Tangere*.—And Mr. Home relates the case of a Lady, whose death occasioned by an affection of her breathing, happened about a month after a Cancer from her Breast had been successfully extirpated.—On examining the lungs, several bodies were found of a substance between Jelly and Cartilage, which he supposes were cancerous tumours; but if he had been ignorant that this disease had existed in the Breast, would he have hesitated to term them tubercles\*? This subject however will require a separate essay, with which I do not mean to trouble the Public, until I have an opportunity of adding a few more facts to those I have already obtained†.

It

\* See Home on Cancer, Case xviii. *p.* 76.

† The above opinions originated from having frequently observed Patients affected with Cancer, to be troubled with a distressing cough, and they received some confirmation from the following case. A person of what the Ancients would term a *Leucophlegmatick* temperament, applied to me  
some

It is observable that Cancers, Hydatids, Tæniæ, Worms, and other extraneous bodies, that are more or less endowed with the principle of vitality, and whose life is destroyed by the preparations of Iron, are altogether void of red blood, but that on other Animals whose blood is red, it never acts as a poison\*. From a Comparison

some time ago, on account of an Ulcer in his Leg. But his chief complaint was a constant short dry cough, with stitches and flying pains in his Chest, which disturbed his rest at night. Impressed with the above opinions concerning that species of Phthisis, which I thought his symptoms indicated, I prescribed the Carbonate of Iron; but to restrain the stimulating powers of this medicine, Digitalis was united with it, as I conceived the former alone, by the general excitement it causes, would be injurious to the lungs, where irritation already existed. By persevering in this plan for three weeks, his cough mended surprisingly, but it is not in my power to relate the sequel of his case, as he did not afterwards attend the Dispensary. Whether his amendment ought to be explained on those principles future experience can alone determine.

\* From a few coarse experiments I have tried on white blooded Animals, I can assert, that the Carbonate as well as the different Oxides of Iron, are destructive to their lives; but when applied in moderate quantity or for a short period, they like other Poisons excite increased actions before the Animal is deprived of life. These experiments are further strengthened by a remark that neither Worms or Snails are ever found in Bogs, where it is well known that different salts of Iron usually abound, but particularly Sulphate of Iron.

Of

parison of those facts; we may infer that Iron; the colouring matter of red blood, is present for some more substantial object, than merely to bestow the sanguine colour, and that object may be the provision of an antidote in the vessels of such Animals, that, if in sufficient quantity will protect them from the inroads of those beings upon which it acts as a poison\* and I would be glad of an opportunity of trying a course of experiments that would enable me to judge, whether the blood is less saturated with Iron than nature requires, in persons who are subject to those depredations; and whether the introduction of a due proportion of that metal into the circulation, would not restore the body to a state capable of resisting those Innovators.

If those observations are just, we may concur in the remark so frequently made on the universal prevalence of Iron—that nature has

\* Iron of all metals, may be taken in the greatest quantity, without proving detrimental to red blooded Animals. and in them it is present in such abundance, that Menghini from his experiments, calculates that about two ounces and a half of Iron circulate in the Blood of a healthy middle aged Man—which affords a presumption, that it serves some important office in the Animal Economy, probably the preservation of the *individuality of the system*, and the prevention of those diseases produced by the formation of Parasitic Animals—

every

every where disseminated a metal that is every where of service in the arts—and we may add with equal truth, that in the same metal, she has provided a remedy, for those disorders that are not peculiar to any climate, but prevail in every region, where their antidote is found.

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## POSTSCRIPT.

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I AM glad that the slowness of the Press enables me here to acknowledge the liberality of the Medical Men of this City, several of whom as soon as this Essay was announced for Publication, gave me an opportunity of trying the effects of Carbonate of Iron, on such cancerous Patients as happened to be under their care; and in so short an interval, I attended several cases, which have contributed to strengthen my opinions, as well with regard to the nature of the disorder, as the efficacy of the remedy I recommended—I shall therefore make known my additional experience, and although in every instance, there has not been a sufficient length of time, for a complete cure, yet the amendment

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visible

visible in *every* case, affords too strong a confirmation of the positions I have advanced, to be longer withheld from the Public.

I shall in the first place relate, two cases of Cancer in the Breast and Uterus, without instances of which, my Essay was extremely defective; but until it went to Press, I had only to regret, that it was not in my power to render it more perfect.

Mary Gorey placed under my care by Mr. Garnett\*, on the 19th of November, 1805, was 52 years of age, and though Married, never had Children; she had received a hurt in her left Breast, about eight years before; some time after which, she perceived a small hardness near the nipple, which became retracted, but these symptoms were not attended by the shooting pains, till six years afterwards, at which time they became very severe. She consulted several Surgeons who recommended extirpation, but she neglected their advice, and at the instance of a Female Friend, applied an Arsenical Plaister in September 1805, which in three

\* Surgeon to Swift's Hospital, and the Dublin General Dispensary, and Professor of Surgical Pharmacy to the Royal College of Surgeons.



weeks detached a tumour about the size of a Pigeon's Egg together with the nipple, but the burning sensation occasioned by the application was almost more than she could endure. The lancinating pain still continued and considerable induration of the Breast. The Ulcer displayed no inclination to heal, and in this state I first saw her, when I applied the levigated Carbonate of Iron, and directed her to take a pill containing six grains every fourth hour, and to moisten continually the integument round the sore with a lotion composed of three drams of the Sulphate of Iron, dissolved in six ounces of water.

On the 21st of November the second day after, a Crust was formed, and the shooting pains much easier, of which, on the 23d, short as the interval may seem, she ceased to complain—she persevered in her medicines, and the sore assumed the appearance of healing, until the 28th, when she left town, and I had not an opportunity of seeing her 'till the 15th of December. During her absence, she continued the powder and lotion until a hard cord, which she felt extending from her Breast to the axilla, and described as a drag that hindered the free motion of her arm, was dissipated—upon which, and

the Ulcer being healed, she discontinued her medicine, and so secure does she think herself that I fear she will not follow my advice to persevere in its use; which notwithstanding the cicatrization of the Ulcer, and her freedom from pain and induration, I cannot think an unnecessary precaution.

The case of Cancer of the Uterus was committed to my charge by Doctor Breen\*, on the 17th of November, and he has had the kindness to furnish me with the following history of the several circumstances attending it previous to that day.

“ Eleanor M’Clean, a widow, aged about 47,  
 “ applied for advice at the North West Dispensary the 18th of April, 1805. Had been affected from about the commencement of the  
 “ year, with constant pain in the small of the  
 “ back, attended with frequent shooting pains  
 “ about the hips, extending to the groins, more  
 “ particularly affecting the left hip and groin.  
 “ There was also a constant discharge per vaginam, either of what she described as a reddish  
 “ fluid, or of a fluid similar to that discharged

\* Physician to the North West Dispensary, and Assistant to the Lying-in-Hospital, Dublin.

“ in Leucorrhoea ; they alternated with each  
 “ other, and were nearly equal in duration.  
 “ She also suffered much from pain in making  
 “ water, and a frequent desire to pass it. Coun-  
 “ tenance languid and emaciated. On the 31st  
 “ of December 1804, had a profuse discharge  
 “ of blood per vaginam, the Catamenia had been  
 “ absent for five years preceding, this discharge  
 “ continued for about three weeks, and on its  
 “ disappearance the symptoms before described  
 “ commenced. She has had four Children, her  
 “ last about seventeen years since. But for a  
 “ great part of her life she laboured under  
 “ Leucorrhoea, which complaint had left her  
 “ about a year before she was attacked with her  
 “ present illness. I ordered her the inspissated  
 “ juice of *Cicuta* made into pills. She continued  
 “ to use them, the dose being gradually in-  
 “ creased, for about eight weeks ; at which  
 “ period she went to the neighbourhood of  
 “ Sandymount, in order to use the tepid salt-  
 “ water baths, and remained there five weeks,  
 “ occasionally coming to town for advice. From  
 “ the time she left Dublin, as she evidently be-  
 “ came worse while using the *Cicuta*, I discon-  
 “ tinued its use, and from that to the month of  
 “ October, as I knew of no rational practice that  
 “ afforded hope of permanent relief, the only  
 “ plan

“ plan pursued was the administration of Opium  
 “ to alleviate her sufferings, and Rhubarb and  
 “ Sulphate of Potash to obviate costiveness.—  
 “ In October the pains becoming much more  
 “ violent, the discharge per vaginam very foetid,  
 “ the red discharge having ceased for some time,  
 “ the countenance quite cadaverous—and being  
 “ sanctioned by the opinion of one or two Medi-  
 “ cal Friends that the exhibition of Arsenic was  
 “ justifiable under the circumstances of the case,  
 “ on the thirteenth of that month, she began  
 “ the use of a solution of white oxide of Arsenic  
 “ in distilled water; from that to the seventeenth  
 “ of November, she took about seven grains of  
 “ the oxide. On that day, the Carbonate of  
 “ Iron was given to her, and the Arsenical  
 “ Solution discontinued. While using the Ar-  
 “ senic, the discharge became so acrid, that she  
 “ thought it excoriated her thighs when it  
 “ touched them. In that interval, according  
 “ to her account, there passed several fleshy  
 “ lumps, two of them in size nearly equal to the  
 “ first two joints of the middle finger. During  
 “ the time she used the solution, she conceived  
 “ it to be of service, but this I rather attribute  
 “ to the effects of imagination, as she seemed to  
 “ derive much consolation from having a medi-  
 “ cine

“ cine exhibited to her, which she was informed  
 “ was powerful in its operation, and might possibly afford her relief.

“ In the detail I give you, I merely mention  
 “ the principle medicines she took, conceiving  
 “ an account of the symptoms of her disease to  
 “ be the great matter necessary for your enquiry. I therefore omit mentioning different directions that were occasionally given, and some medicines administered that could have no material influence, either on her particular complaint or general health. I think it proper to add that I examined the state of her Uterus per vaginam, shortly after her first application, and a second time in the beginning of October. On the first examination the Os Uteri had a particular hardened feel. I find it difficult to describe the peculiar sensation which it conveyed to the touch. At the second examination the feel of the Os Uteri was much the same, and that viscus in the interval seemed increased in size. Her Pulse throughout the whole time, to the best of my recollection, was about 120 and feeble. Her appetite bad.

“ The

“ The state in which we found her, the day  
 “ I committed her to your care, as well as the  
 “ very great alleviation of her complaint that has  
 “ since taken place, it is unnecessary for me to  
 “ mention.”

On the 17th of November 1805, as mentioned above by Doctor Breen; I first saw her; all the symptoms he so accurately describes still continued, and from debility and the frequency of the pain she was unable to rise from her bed. A pill containing six grains of the Carbonate of Iron, was directed to be taken every sixth hour, which not disagreeing with her Stomach, was on the 19th ordered to be repeated every third hour,

On the 21st, she looked much better, had an easy night, was free from pain, and passed her Urine with less difficulty, which did not deposit so thick a sediment; her pulse which was before quick and weak, had become full and strong: she mentioned that about half an hour after taking a pill, the lancinating pains returned with increased violence, and that she several times experienced a fit of shivering.

As some of these symptoms were probably produced by the stimulating powers of the  
 Iron,

Iron. I interdicted the use of Wine and solid Animal food, and prescribed a milk and vegetable diet. The dose of her medicine was continued as before, and an injection frequently used, composed of two drams of sulphate of Iron, dissolved in eight ounces of water.

On the 23d, the good effects of this treatment were evident, the pains being less severe, the pulse tranquil, the urine passed with more ease, and the distressing excoriation mentioned by Doctor Breen, hourly diminishing, the discharge formerly acrid and watery, having now become thick and ropy. She took her pills regularly, but the sensibility of the parts, for a time prevented the use of the injection. I did not see her till the 26th, when she complained, that after I had seen her on the 23d, the pains returned and continued with great severity for several hours; but at length they left her, and she has scarcely felt any uneasiness except what arises from a sense of weakness in her back, and the frequent desire of making water. She rests tolerably well, and can now sit upright without pain, which she could not do for the last six months. Her medicine was increased to ten grains every fourth hour.

On the 29th of November, her looks and general health had continued to improve,—the pains, which but seldom occur, are scarcely marked by a lancinating sensation, and she is now able to quit her bed, and walk about her room; the increased dose, which had excited nausea was diminished to five grains every third hour, and an Enema composed of two drams of the Carbonate of Iron suspended in six ounces of Starch was administered in the evening.

December 3.—Her strength is daily increasing, and her rest undisturbed by any pain: The discharge from the Uterus and the consequent excoriation, are no longer apparent—so that she is enabled to use the injection, which was before discontinued, of the solution of Sulphate of Iron.

From the 6th, to the 14th of December, the internal use of Iron was interrupted by costiveness and griping pains, for which it was necessary to administer various Cathartick medicines. But as often as the state of her bowels would admit, the Enema already mentioned was repeated, with the addition of a dram of Tincture of Opium, that I hoped would relieve the frequent desire of making water, which has become  
more



more inconvenient, than it was before her present course of medicine; but I am inclined to look upon this symptom as an effect produced by the tumours near the bladder, which being deprived of their vitality, give the stimulus of an extraneous body, and excite by their irritation the contraction of that viscus.

On the first attack of the bowel complaint, I directed her to make use of Animal food, but to her inability from poverty to follow my directions, with which she did not acquaint me 'till the 17th of December, I attribute the continuance of this disorder—but having put her in a way of removing that difficulty, I hope that with the return of a regular habit of body, her perfect health will be restored; as on that day she had still continued free from the lancinating pains, and the excoriating discharge per vaginam—strong proofs of the destruction of the independent life of the Cancer, still further confirmed by a considerable number of small lumps having come away, some of which she shewed me, that were of a gristly texture and about the size of a bean.

MARGARET MILLER, between 40 and 50 years of age, observed five or six months since, a

small hard tumour at the angle of her mouth, which at first gave her no uneasiness, but during its increase at length attacked her with lancinating pains. By the advice of some of her friends, she applied hemlock poultices, and neglected to consult a Surgeon, fearful she would have to encounter an operation. However the tumour increasing, at length ulcerated, discharging a thin sanies, and some time afterwards a fibrous matter, which she said resembled a bundle of halfrotted threads.

The Ulcer rapidly spreading, she applied at Mercer's Hospital for relief, but the disease had extended too far for operation, having to a considerable degree, affected the right cheek. Mr. Macklin, Surgeon to that Hospital, thought it a fair and unequivocal case, for a trial of the Carbonate of Iron, and on the 21st of November 1805 placed her under my care.

At that time the parts surrounding the Ulcer were indurated, and accompanied with a dusky redness of the integuments—she complained of much pain, and for the preceding fortnight was unable to use any solid food; but whatever nourishment she took, was in a liquid state, and to prevent its coming in contact with the Ulcer, was received from the spout of a tea pot.

The

The Ulcer was in the first instance filled with levigated Rust of Iron, and she was directed to take a pill containing five grains of that preparation every fourth hour, and to bathe the indurated parts frequently with the solution of Sulphate of Iron.

November 23.—The uneasiness and pain much diminished, and the Ulcer discharging in place of Ichor healthy looking matter. The external applications had been constantly made use of, and the pills did not disagree with her Stomach and Bowels,—They were therefore directed to be repeated every third hour, and the surrounding indurated parts to be kept constantly wet by folded linen, dipt in the solution.

November 26.—The everted edges of the Ulcer had inclined inwards, the lancinating pains were less troublesome, and she could now make use of solid food without inconvenience ; but the surrounding redness had extended considerably.

December 1.—The lancinating pains were no longer perceptible, and the induration of the parts surrounding the Ulcer much diminished.

Decem-

December 5.—The Ulcer had assumed a totally different appearance from that I first saw and no longer exhibited any characteristic of Cancer—the surrounding integuments were of a much brighter red, and the induration considerably diminished.

December 10, & 15.—The redness as well as the induration, was entirely dispersed and not more of the Ulcer remained unhealed than the size of a pea.

December 19.—The Ulcer was this day completely healed, she was however directed not to abandon immediately the use of her medicine.

PATRICK DUFFY, whom I saw for the first time at Mercer's Hospital, on the 18th of November, had a Cancerous tumour, which engaged the right eye and both eye-lids, and commenced about three years before, in a warty excrescence of the inferior eye-lid. The upper eye-lid became a hard tumour, which overspread the eye, and extended to the temple where it was attached to the bone—and from the inferior eye-lid cauliflower excrescences sprouted upwards—the shooting sensation he experienced, scarcely amounted to pain.

There

There has been less amendment in this case than in any I have yet seen, however by the use of the powder and lotion, the hard tumour is evidently softened, and suppuration has been excited around the above-mentioned excrescences, some of which have come away.

ANDREW O'NEIL, aged about 30, who was sent to me by Mr. Dease\*, observed two years since, on his lower lip, a hard lump about the size of a bean, which gradually increased with frequent shooting pains, till it ulcerated towards the mouth; he was recommended by a friend to apply a Plaister supposed to be of Arsenick, in consequence of which, it ulcerated externally.

I first saw him on the 22nd of November 1805 a frightful Ulcer lay beneath the lip, extending to the lower part of the Chin, and communicating with his mouth; the gum was also Ulcerated and all the fore teeth were loose in their sockets. The lip was of a stony hardness, and the edges of this extensive Ulcer were high and turned back—he complained of the most violent pains shooting from the Ulcer to the back of his head, and the sub-maxillary glands were enlarged.

\* Surgeon to the County of Dublin Infirmary, and Professor of Anatomy and Surgery to the Royal College of Surgeons in Ireland.

I filled the cavity with Rust, over which I applied a pledget of lint and retained all by a bandage. Ten grains were ordered to be taken in the form of pills, every fourth hour.

On the next day I found that the pains had left him, but they returned on the 25th with intolerable severity; however on the following day they were in a great measure dissipated, and did not return till the 1st of December, from which time they continued violently shooting along his jaws towards the back of his neck, till the evening of the 2nd; and on the 3rd, he was so totally free from pain, that he enjoyed a better night's rest, than he had done for a considerable time before: but finding on the 4th, that he was troubled with a difficulty of breathing and a severe cough, which complaints I attributed to the excitement of the Iron, to avoid the stimulation of grosser Animal food, I desired him to live chiefly on Milk and Vegetables, and at this juncture directed him to bathe his jaws, frequently with a Solution of Sulphate of Iron.

White sloughs came away at every dressing, the Ulcer appeared cleaner, and there was no pain of any kind till the 7th, when he complained of much soreness in the Ulcer, but not the lanci-

lancinating pain which distracted him before ; I was not then able to account for this symptom, but he acknowledged a few days afterwards that he was tampering with Arsenick, to which I not only attribute this soreness, but the frequent hæmorrhage of the Ulcer, both of which for some time, continued to affect him.

December 11.—The Ulcer is more excavated and the communication with the mouth enlarged ; but the hardness of his Lip and the surrounding edges of the Sore is much diminished, while the colour extending half an inch round the Ulcer is of a higher red, and resembles that of an inflammatory tumour. As his strength was reduced, and as the lancinating pains had not returned, I ordered him a soup and meat diet, and diminished the quantity of Iron taken internally, to five grains three times a day.

From this to the 18th, he continued free from every kind of pain, except the soreness already noticed ; he slept well, had no return of his cough, his strength increased, the Ulcer still throwing out sloughs, and the redness extending more widely ; when he was again attacked with the most insufferable pains, not however proceeding from the Ulcer which was their former seat, but

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shooting

shooting from the maxillary glands at either side towards the back of his head; these pains were so severe that he could not bear them without crying out, and frequently fainted under their violence; on enquiry, I found that he had directed all his attention towards the Ulcer, and totally neglected to bathe his jaws and neck with the Solution of Iron, according to my injunctions. I have studiously avoided the introduction of my theory into the history of those cases, but it would be unpardonable here not to notice the confirmation it receives from these symptoms. The vitality of the original Cancer seems to have been destroyed, and the Ulcer which marks its situation, has no longer a cancerous appearance; but the roots it had distributed through the neighbouring parts, not being subjected to a local application of the medicine, still preserve their life, and may be sensibly felt like cords over the jaw bone towards the maxillary glands, and evidently occasion all the tortures of the Patient.

I reiterated my injunctions with respect to the use of the lotion, and further prescribed an ointment composed of equal weights of Axunge and Rust, to be well rubbed in to his neck and  
jaws;



jaws; while he was to continue his pills, taking one every third hour, and two grains of Opium at night, to dispose him to rest.

On the 21st.—Cloths repeatedly dipped in a solution of two ounces of Sulphate of Iron in a pint of water, were for twelve hours constantly applied to his neck and jaws; and this treatment at length overcame the pains, but as the Printer has called for my last sheet, I must here close this interesting case.

Mr. Rivers\* willing to give a trial to my remedy, has been kind enough to oblige me with the two following communications of its effects.

A Lady near Lucan, a great length of time labouring under an extensive Ulcerated Cancer of the Breast, with whom Cicuta and all the usual remedies had been tried, adopted by the advice of Mr. Rivers the use of the Carbonate of Iron, which was first applied in the beginning of November 1805; in a few days the lancinating pains diminished, which had long been exceedingly severe. The discharge gradually altered for the better, became more moderate and less offensive, and the lips of the Ulcer changed from

\* Surgeon to the Hospital of the House of Industry,  
a livid

a livid to a clear red. Although this Cancer had arrived at its worst stage, by the axillary glands being enlarged and fixed, yet there is still some hopes of a recovery, as the lancinating pains have almost totally vanished.

A Gentleman of this City, was under Mr. Rivers's care for a cancerous Ulcer, extending from the Ala of the left Nostril, towards the Zygomatick process of the cheek bone, to which, about the middle of November 1805, the Carbonate of Iron was applied; the application was not disturbed for several days, and formed a dry scab, which in part falling off, disclosed the Ulcer in a granulating state. The application is still continued, and the Ulcer is gradually cicatrizing.

These cases will induce at least a trial of this remedy, and I am confident the experiment will occasion no impediment to its adoption.

*F I N I S.*

## ERRATA.

*Page 23, line 17, for occultus read occultos.*

*Page 24, line 23, for iigitur read igitur.*

*Page 25, line 22, for Hune read Hunc.*

*Page 26, line 27, for cochclearum read cochlearum.*

*ib. line 27, for elixæ read elixæ.*

*Page 27, line 24, for lenebus read lenibus.*

*Page 31, line 9, for propogate read propagate.*

*ib. line 23, for velunt read velut.*

*Page 34, line 5, for irolence read violence.*

*ib. line 16, for coagulatied read coagulated.*

*ib. line 22, for constitutinal read constitutional.*

*Page 54, line 16, for snius read sinus.*

*Page 70, line 9, for order read orders.*

*Page 113, line 11, for is read are.*

*Page 115, line 5, for Ion read Iron.*



